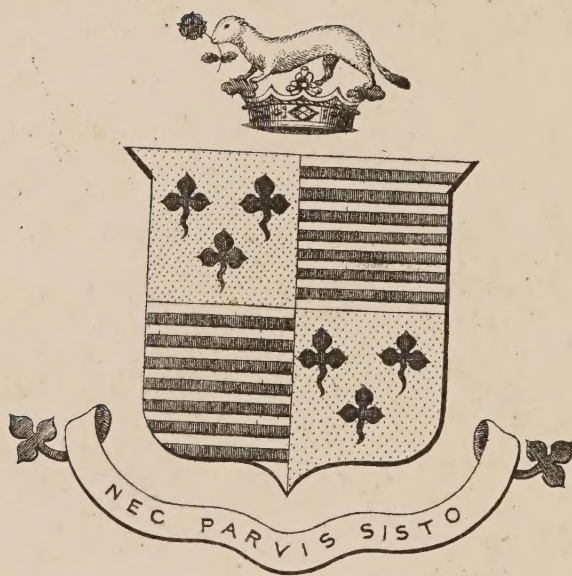


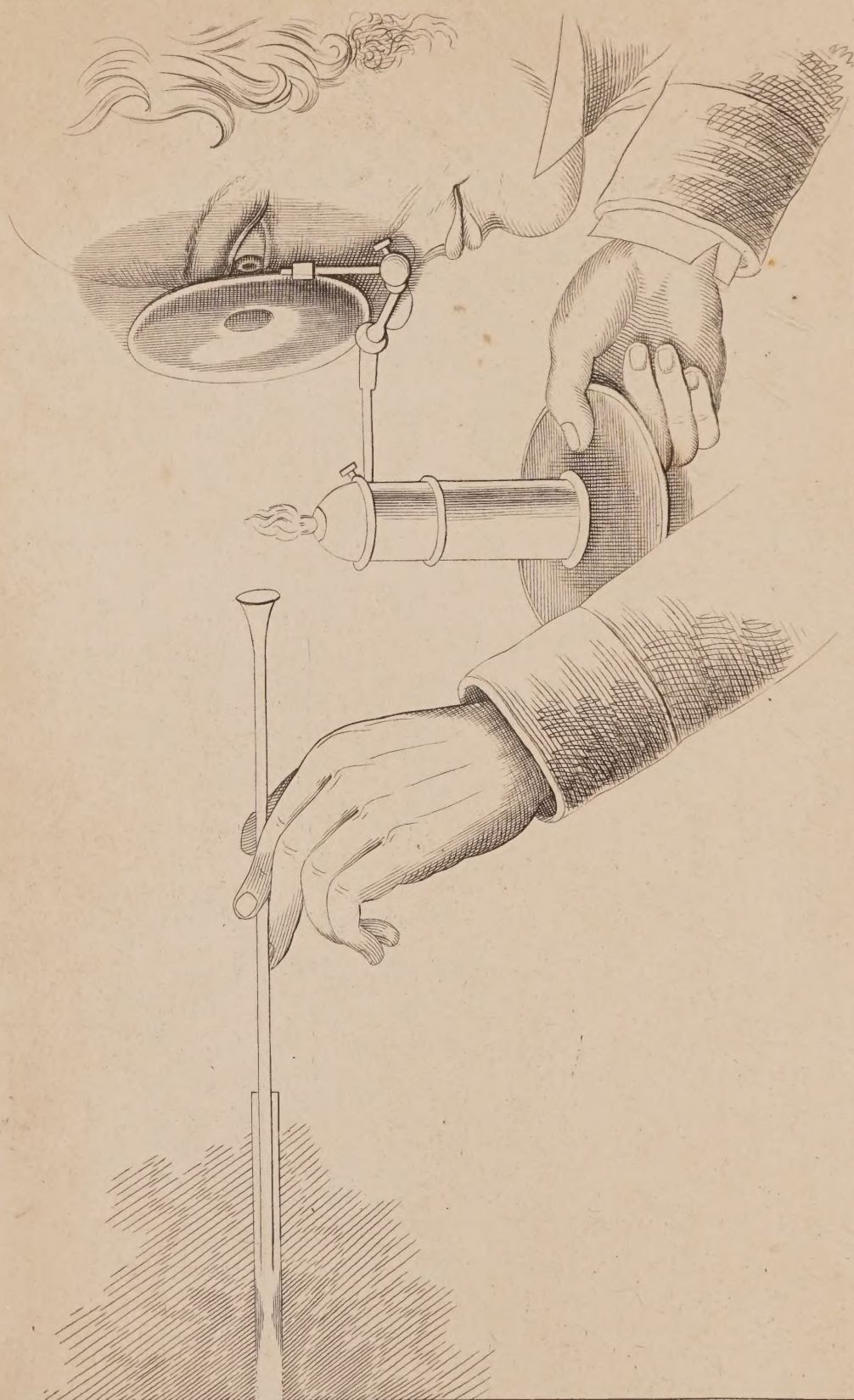
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*Frederick Symonds M.A.
Magd. Coll. Oxon.*

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AN
ESSAY ON SPERMATORRHŒA,

AND
URINARY DEPOSITS;

WITH
Observations

ON THE NATURE, CAUSES, AND TREATMENT
OF
THE VARIOUS DISORDERS OF THE GENERATIVE SYSTEM.

Illustrated by numerous interesting Cases.

BY RICHARD DAWSON, M.D.,

LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS, LONDON; MEMBER OF THE
ROYAL COLLEGE OF SURGEONS OF ENGLAND; SURGEON TO THE DISPENSARY
FOR THE TREATMENT OF CALCULUS, DIABETES, AND THE VARIOUS
DISEASES OF THE GENITO-URINARY SYSTEM.

THE FOURTH EDITION, GREATLY ENLARGED AND IMPROVED.

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DEDICATION.

TO M. LALLEMAND,

PROFESSEUR A LA FACULTE DE MONTPELLIER, MEMBRE CORRESPONDANT
DE L'INSTITUTE, ETC., ETC., ETC.

MY DEAR SIR,

Were I not actuated by the recollection, and a due sense of the benefits conferred upon me when your pupil, the high position in which your researches upon the subject of this essay have placed you, would naturally have pointed you out as the fittest person for its dedication. I therefore trust, that in offering you this testimony of my admiration, respect, and esteem, you will receive it also as a humble, but sincere and grateful acknowledgment of the many favours your kindness and urbanity have conferred upon me.

Believe me,

My dear Sir,

Yours most sincerely,

RICHARD DAWSON.

LONDON, 15, FINSBURY CIRCUS,

September, 1848.

P R E F A C E

T O T H E F O U R T H E D I T I O N .

TWELVE months have hardly elapsed since the last—the third—edition of this work was published; and I am now called upon for a fourth. Although I have made several additions to the present edition, the original plan remains unaltered. During the interval between the present edition and the last, the opportunities for practical observation and inquiry which have presented to me, have been very numerous, and have most satisfactorily confirmed the plan of treatment set forth in the previous editions of this work. My object has not been a large or bulky volume, and I have therefore confined the details to what seemed to me best calculated to establish the principles of treatment in spermatorrhœa, which I advocate, and which I have found in practice so eminently successful. The numerous professional applications to me from eminent practitioners in medicine and surgery, fully assure me that my labours have not been in vain.

15, FINSBURY CIRCUS,
September, 1848.

PREFACE

TO THE THIRD EDITION.

THE rapid sale of two rather large Editions of this work is not only flattering to myself, but a most conclusive proof that my inquiries into, and exertions to illustrate, some of the more obscure and intricate departments of Pathology and Therapeutics have been, not only useful, but approved by the profession. The first edition passed off so quickly, that time sufficient for any material improvement was not afforded. Not so, however, upon the present occasion; for not only have I availed myself of long-past opportunities, but the daily increase and extent of my practice has placed in my hands means the most ample for scientific, pathological, and therapeutical inquiry.

I have endeavoured to the utmost to give a perfect and complete history of spermatorrhœa. For this purpose I have not only appealed to my own more extended experience, but have also availed myself of that of the continental authors, more especially Lallemand, and have enriched this volume with some of the most interesting of his cases, and many of his most valuable observations.

In this Edition I have introduced some remarks upon stricture of the urethra, which I trust will be found not wholly devoid of interest. Gleet is so frequently a concomitant of stricture as well as an independent affection, and I have so frequently seen spermatorrhœa confounded with, or mistaken for, this discharge, that I felt this volume would have been incomplete and imperfect without the few remarks introduced upon stricture.^s

In the diagnosis of permanent or organic stricture, I found the method of *illuminated exploration* (as explained in its proper place), of the greatest possible service. Nor are the advantages of this mode of exploration limited to stricture, for this method of examination will be found suited to inquiries into the general

conditions of the urethra; nor of this part alone, but of many of the other passages, as the throat, ear, rectum, vagina, &c.

The history of stricture necessary involved another of considerable importance, the conditions of the urine, and the nature and effects of its deposits. In the spasmodic forms, the state of the urine is of almost vital importance, and its history would have been incomplete without the adjunct upon urinary analysis.

Spermatorrhœa and the conditions of the testicle are so often and so intimately connected with venereal affections, that I could not in justice to the subject pass these over altogether unheeded; but in the observations submitted to the reader, I have endeavoured, as much as possible, to confine myself strictly to the necessities of the subject.

The cases detailed, numerous as they may appear, yet were absolutely necessary to illustrate in a sufficient manner the principles of pathology and therapeutics laid down in this treatise. These cases have been extracted principally from the materials furnished by my own practice; but when I conceived these principles might be more clearly illustrated or more fully demonstrated by the experience of others, I did not hesitate to sacrifice every consideration to utility, and to draw largely upon Lallemand and others, whom I found likely to substantiate my views.

As many points considered in this volume admit only of unintelligible or but imperfect description, I have added plates, with diagrams explanatory of certain matters not to be rendered otherwise clearly comprehensible. Hence the mode of illuminated exploration, the seat and appearances of stricture, the urethra and urinary bladder, the form and appearance of urinary crystallizations, and other constituents, and also those of the matter of gonorrhœa and chancre, have all and each had such explanations. Upon the whole, therefore, I trust this volume will not be considered inferior to, or less useful than its predecessors upon these important diseases.

15, FINSBURY CIRCUS,
July, 1847.

P R E F A C E

T O T H E S E C O N D E D I T I O N .

THE First Edition of this work was estimated within the limits of a very narrow sale, and that for two reasons :—First, I could not have anticipated that a class of maladies which, if not wholly unknown, are, at least in this country, but little understood, was calculated to attract much of the notice of either the profession or the public. Secondly, still less could I have imagined, that the value of the matter itself would have been much enhanced, by its association with so humble an individual as myself. Upon one of these points, at least, I find I have been mistaken, and I am now called upon for a New Edition.

The very short interval which has elapsed since the first impression, it will hardly be expected, can have afforded opportunity of adding much to the stock of information already placed at the disposal of the profession, consequently the following pages must be regarded as intended to meet the increased demand rather than to furnish the profession with the results of additional experience, or of a more matured judgment.

It may, however, be as well to observe, that even so short a period has served more strongly to confirm myself, as well as to satisfy and convince others in whose judgment I place the most implicit confidence, that the disorders noticed in this volume are deserving of much more serious attention than has been hitherto bestowed on them. Neither is their prevalence so limited as may be imagined, nor have their baneful effects upon the human frame been so truly estimated as their importance demands. When we see the miserable victims of an insidious and unsuspected disease, slowly, but steadily emaciating—when we view a series of phenomena, faintly and indistinctly characteristic of a great variety of cachectic disorders—such as phthisis, hæmoptœ, marasmus, and other forms of wasting, &c.; or even the many varieties of mental derangement; can we, I say, surrender, without the least feeling of remorse—*secundum artem*, as it were

—the unhappy sufferer to his fate? Should we not, rather, in despite of false delicacy, try to investigate the origin and causes of such diseases, and endeavour to trace out and determine the true principles of their cure?

Finding that the original title in many instances led to misapprehension, and in deference to the opinion of persons whom I greatly esteem and respect, I have altered it, and substituted the present for that adopted in the former Edition.

I have been led into these reflections, because I have been the subject of some gross and malevolent aspersions, as well as of much abuse, the scurility and personality of which betray anything rather than the pure and unadulterated spirit of professional decorum or public morality, the wanton violation of both of which has been most falsely and maliciously imputed to me. I could, however, appeal to the grateful sense of services rendered, and benefits conferred by a single operation upon sufferers, who for *years had sought for relief in vain* from the ordinary routine of false "*delicacy*" and mawkish "*prudery*." Firm in my own integrity, and confident in the rectitude and purity of my motives, I shall not be deterred by calumny or slander from researches which, whatever may be the consequences to myself, must ultimately be conducive to the health and happiness of our fellow creatures; neither shall I be intimidated nor diverted from my purpose, by the apprehension or the imputation of *false analogies* or *degrading associations*.

Since the first impression of this work, I have applied the cautery with the most complete success upon sixty-four patients; and out of the whole of this number, have not met with a single instance of failure.

Ample experience has still more strongly convinced me of the importance of the subjects which constitute the matter of this volume, and of the great good which would result from a thorough and searching inquiry. It is therefore upon public grounds, and in defiance of personal abuse, that I venture to offer a second impression of this volume to the profession and the public.

15, FINSBURY CIRCUS,
January, 1846.

P R E F A C E.

AMONG the many works so constantly issuing from the medical press, replete with the most ingenious speculations, and enriched with principles founded upon the closest and most attentive observations, it unaccountably happens, that none have been specially devoted to the subject which constitutes the principal matter of the following pages. Indeed, it would seem not very inconsistent to infer that, in reality, no such diseases ever existed, as they could hardly have escaped the inquisitive vigilance of modern medicine. Strange, however, as this may appear, such diseases not only prevail, but to an extent hardly to be credited, unless by those who have devoted themselves to inquiries upon the subject. It is true that Impotency is noticed in systematic works upon the practice of physic, but in so vague a manner, and with so little precision, that we rise from the perusal as little instructed as when we first sat down. "Indeed," says Curling, "the little information we possess respecting it, is chiefly to be found under the head of Impotency in works on medical jurisprudence, in which it is cursorily considered, principally in relation to points of medico-legal interest, and scarcely at all in reference to practice."*

In a practical point of view, the sources of information in this country may be regarded as an absolute nonentity, for I hardly know of any, except what his own experience may present to individual practitioners. Nor has this dearth been passed over

* Curling on Disease of the Testis, page 39.

without heed or complaint. Dr. Smyth, in a paper on Impotency published in the *Lancet*, August 28, 1841, observes: "It is a subject not less interesting to the moralist than to the medical practitioner; and it really is surprising to see that nothing worthy of notice is to be found on a matter so important in the various writings of standard authors. This circumstance appears remarkable and unaccountable, when experience convinces us that sexual weaknesses and imperfections, either hereditary or acquired, constitute the great majority, perhaps nine-tenths of the causes of nervousness, mental imbecility and derangement. How then are we to account for a fact like this—a fact of such frequent occurrence, and so highly philosophic and instructive as it undoubtedly is—having obtained so little attention? Can a general feeling of ill-exercised tenderness towards the depraved habits of most of the pitiable sufferers have operated in preventing the matter from having been duly investigated, and candidly avowed and discussed, or has it resulted from ignorance? The former we are disposed to think can scarcely have been the case; for with the medical practitioner, less frequently, perhaps, than with any other professionalist, from the confidence so readily reposed in his calling, does delicacy or prudery supersede utility."

Perhaps the neglect with which practitioners have treated the subject of Impotency may be explained by the fact, that unless in the case of physical defects, we had no means of forming the diagnosis of such cases, nor were we capable of discriminating them from the mere common derangements of health. It is to the MICROSCOPE that we are chiefly indebted for the new light thrown upon this disorder. The discovery of the *spermatozoa* naturally led to the inquiry, what was the object of their existence in the spermatic fluid? Their existence in the seminal secretions of all animals proved that their presence was essential and philosophy soon cleared up the mystery. Hence, the presence of these animalcules in the urethral discharges, and in the urine, furnished means for the diagnosis of this kind, hitherto one of the most obscure and intricate forms of Impotency.

There are other forms of this disorder, caused by genital derangements, resulting from excesses and other kinds of impru-

dence. In many of these, I found the epididymis in a peculiar condition,—indurated, knotted, and tuberculated. I do not find this condition in connection with Impotency noticed by any of the numerous authorities which I have consulted. When the epididymis is in this state, I have found nothing to effect the cure but the bichloride of mercury. All our efforts will prove futile without this medicine, which, unless in some inveterate cases, acts almost like a specific.

A residence for some time upon the Continent, and the kindness of the surgeons in charge of the large hospitals in France and in Germany, afforded me opportunities of inquiry, which I must have sought for in vain at any of the establishments in this country. The facilities, and the means of such investigation, are less repugnant to the habits and customs abroad than at home. Notwithstanding, however, the numerous and valuable opportunities afforded me on the Continent, I feel that I owe it to common justice, were I actuated by no more worthy feeling, to express my sense of the obligations I am under to my friend and colleague, Dr. Venables, and to Mr. Quekett, Conservator of the Museum of the Royal College of Surgeons, for assisting me in many of my microscopical researches.

FINSBURY CIRCUS,
May, 1845.

Preparing for immediate Publication,

BY THE SAME AUTHOR,

AN ESSAY ON SPERMATORRHŒAL PHTHISIS,

Showing the frequent connexion and dependence of

TUBERCULAR CONSUMPTION,

UPON

SPERMATORRHŒA.

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SPERMATORRHŒA.

&c. &c.

THE object of this essay is to show that many of the most important and distressing diseases attacking the male sex, are to be referred, not so directly to the organs themselves, the functions of which are seemingly deranged, but to others, differing materially in both function and structure. At first sight, perhaps, it would hardly be imagined that the genito-urinary system in man, could exert so extended an influence over the viscera of the body, as to produce almost every imaginable derangement. Yet I think I shall be able to prove that many diseases arise from this cause, escaping detection, until they have acquired an uncontrollable ascendancy. The casual observer, who devotes the whole of his attention to the more obvious phenomena—who merely sees in apoplexy, epilepsy, &c., the types of certain cerebral derangements; in apathy and indolence, a disordered condition of the nervous system—will, of course, regard and treat such diseases as primary affections, nor ever once imagine that all the phenomena may spring from a very different source, and which, if investigated and controlled at first, might have laid the foundation of a good constitution and permanent restoration to health.

It has frequently fallen to my lot to see persons at an age which may be considered the prime of life—the period of the fullest health and vigour—the feeble and decrepit types of a premature decay, embittered too by all the agonizing effects of the utmost bodily infirmity and mental imbecility. There is not, perhaps, in the whole category of pathology, a more painful subject for reflection, or one more disagreeable for discussion,

than the condition of these miserable votaries of solitary sensuality; and, indeed, nothing but the hope of rescuing some of those, who have not yet irrecoverably contaminated their constitution, from the dangers with which they are threatened, or of preventing those, who have not yet exposed themselves, from braving the dangers which they contemplate—nothing, I repeat, but the hope of effecting some reformation amongst a class whose pernicious habits so frequently come under my review—could have reconciled me to publicity upon so painful a subject.

Not that I, by any means, intend to assert, that every case of impotency, or premature decay, originates in improper indulgence. On the contrary, it has been my lot to witness many instances referable to causes, in the exciting of which the unfortunate sufferer himself had no participation. Such, indeed, more especially merit, if all cannot equally claim, our sympathy and our commiseration. Many, however, it is to be regretted, either from feelings of delicacy or from want of resolution—often too, from mistaken notions as to the real character, and the undermining nature of their disorder—sapping as it were the very foundations of health and vigour—neglect the disease until it has attained a frightful, if not altogether incurable ascendancy.

My attention had been directed, at an early period of my professional career, to the nature of this affection, and to the changes superinduced in the structure of some of the more important parts of the genital apparatus. Although in some degree acquainted with the symptoms and character of this affection, with its train of miserable associations, yet it was not till after a sojourn at some of the Continental schools, particularly at Paris and in Germany, that I became more intimately acquainted with all the phenomena. As a sort of representation of the effects of illicit indulgence upon the health generally, I may instance the following case:—

CASE.—One of my earliest friends, a gentleman endowed with great natural talents, strong sensible mind, and to all appearance possessed of great mental vigour, for some years had been suffering from an incessant discharge from the urethra, so

obstinate that it resisted all the means adopted for its removal. He also suffered from pains of an anomalous character in different parts of the body; and, notwithstanding very active treatment, no permanent benefit was obtained. About this period I left England, and consequently lost sight of this gentleman for nearly six years. He had, however, long ere this, evinced an aversion to correspondence.

A medical gentleman in practice in the neighbourhood where my friend resided, being in London some time ago, communicated to me the following particulars:—

He stated that he had been consulted by this gentleman, who complained that he then had lost all desire whatever for sexual intercourse, which he attributed to some person having removed the vital part of the testicle, while he was under the influence of mesmerism! Not only the improbability, but also the absolute impossibility of such an occurrence was explained, and urged upon him; but no further investigation appears to have been instituted. Being in the country, I accidentally met this gentleman's brother, from whom I learned, that some few months after the occurrence above detailed, symptoms of insanity became much more evident. During the first twelve months he was kept under the superintendence of his friends; but, the malady increasing, it ultimately became necessary to place him in a lunatic asylum, where, from everything I can learn, I fear he will have to remain for the rest of his days. This case made a very strong impression upon my mind; one of my earliest associates, of an active and vigorous mind, robust health, not the slightest apparent tendency to any form, or even degree of mental alienation—in a few short years the inmate of a lunatic asylum. The mind—"that grand prerogative of man"—alienated and destroyed; my earliest acquaintance—the friend of my youth—the inmate of a lunatic asylum; a living, certainly, but senseless mass of clay!

From what I have seen, I cannot help feeling that this case is an instance of the baneful influence of (unnaturally induced) serious disorders of the genital system upon the mind; and that, had such a view been taken at the commencement, and the case been treated accordingly, the melancholy catastrophe might

have been averted. Indeed, cases of this sort require great attention, and close watching, to avert future results; and I think I shall be able to show, or at least to make it appear probable, that the majority of young men who commit suicide, commit the rash act while actually suffering from disease of this character.

SYMPTOMS.

The symptoms of so formidable a disease as the one about to be considered, bid defiance to anything like classification or nosological arrangement. Thus, sometimes there is general nervousness; sometimes the most violent palpitation of the heart from the slightest mental emotion, presents the principal feature.

The sterile, or impotent patient, almost invariably exhibits a peculiarity of temper, and his general deportment even undergoes a remarkable alteration. His temper, for instance, is extremely irritable, and he is fretful, peevish, discontented, and his appearance shows a marked degree of melancholy. But such patients are far from being courageous, or excited to anger or resentment, even by those incidents which, under other circumstances, would arouse their indignation. On the contrary, they are timid, fearful, and apprehensive, and endure injuries which they have neither the spirit nor the courage to resent.

Very frequently if such patients be subjected to proper examination, they will be found to be suffering from pollutions, in some one or other of their forms. It will be found on strict inquiry, that seminal discharges occur at some periods, even though the patient himself may not be aware of them, especially if they occur at night.

Nocturnal pollutions when occasioned by spermatic plethora, may prove beneficial, provided they do not recur too frequently. But if on the contrary they occur too often, the seminal vesicles may either become morbidly irritable, when emissions will take place from the least possible excitement; or the contrary condition may supervene, and the ducts, from debility, perform their offices very imperfectly. Under these circumstances, emissions

take place without erections, and are not attended with any degree of pleasure. These pollutions are always followed by a feeling of indolence, discontent, disordered imagination, confusion of thought, pains in the back and loins, and a sensation of fulness in the head, which, however, disappears in the course of the day, and does not re-appear till after another emission.

After a time the consequences become more serious, and more permanent, and two or three days or more, are required to get rid of them. As yet, perhaps, real disease has not been established; but there are indications which must not be overlooked or neglected, and these are threatenings which it will be highly prudent to avert. The presence of well-formed semen in the seminal vesicles, is essential to natural erections, without which neither direct nor indirect excitement would have any influence upon the erectile tissues. Therefore, impotency of whatever description—habitual or acquired—arises from deficiency or total absence of natural stimulus in the vesicles, and is, consequently, a certain sign of the existence of diurnal pollutions.

If the atony of the ducts be suffered to continue, these nightly discharges take place without either dreams, emotions, or pleasure, or indeed, sensation of any kind whatever; and the patient would remain wholly unconscious of what had occurred, were it not for the stains observable upon the sheets or night-shirt, on the following morning. The penis now becomes flaccid, and the seminal vesicles more insensible, and in proportion, more passive. Lallemand has well described the effects of such pollutions. He observes:—

“The effects of nocturnal pollutions are generally supposed to be proportioned to their abundance, frequency, and energy of the phenomena that precede and accompany them. This conclusion, however, is very false; for it is generally when the emissions become less frequent and less abundant, that they are followed by serious and protracted general symptoms. This anomaly, however, is more apparent than real, for the nocturnal now become conjoined with diurnal pollutions, which latter likewise escape without any sensation, passing off with the urine, or when the patient is at stool, without either his knowledge or observation. It is of importance, therefore, to warn

both surgeons and patients of the errors which they are daily committing, in estimating the importance of these nocturnal pollutions only by their abundance and frequency."

When seminal discharges occur during the voiding the urine, or during a stool, the most serious and dangerous consequences may ultimately ensue, in consequence of their frequent repetition. Such patients ultimately become seriously ill; and Lallemand, whose observations I have always found accurate and faithful, says:—"These patients soon become ill, their most intimate friends are ignorant of the cause of the various disorders they complain of, the medical man who possesses their confidence, is not better informed, for even the patients entertain no suspicion of the real nature of their complaint. Hence their indisposition is set down to ennui, tendency to melancholy, or to hypochondriasis. When their disease assumes a more serious aspect, then the constitution is said to be delicate, impressionable, or unhealthy; and they are looked upon as *malades imaginaires*. They are reproached with too much care of themselves, or an over-fondness for medicine. Medical men in extensive practice, tire of hearing the tale of so long a series of unintelligible and inexplicable maladies, and rid themselves of such patients by recommending them to travel, or a change of air. Charlatans plunder them; officious friends advise marriage, or some sort of occupation to fill up the void in their existence; but all blame them, because none really comprehends the nature of their disorder. Unfit for any serious occupation, and incapable of deep reflection, they become dissatisfied with themselves, and still more so with others. Absorbed in one sole thought, they return incessantly to themselves to seek for the cause of their lamentable condition, and soon become misanthropical."

We generally find unnatural seminal discharges accompanied with increase of appetite from the necessity the system feels of compensating the daily losses it sustains, and to counterbalance the excitement of the genital organs; sometimes to such an extent that the appetite may be said to be voracious. Masturbation often produces similar effects. The digestion, however, at last becomes impaired, but still these patients force them-

selves to eat, expecting to recruit their strength by abundant and succulent food; or they may feel a real appetite. But their feeling, in this latter case, is not that of real hunger, but a sense rather of gnawing, uneasiness, or sinking; such patients resort to stimulating articles of food, which only increase the difficulty and pain of digestion, by increasing the irritation of the stomach. The momentary pleasure or relief obtained by brandy, or other stimulants and cordials, often entails hours of misery and suffering. Hence, frequently result sympathetic affections of the liver and heart, more especially when the irritation has been prolonged. The bowels become constipated, and distended with wind.

The symptoms, however, vary in different individuals, and even in the same individuals on different days. In the advanced stages, constipation becomes established, a condition which greatly aggravates the mischief, by producing abundant diurnal pollutions. Notwithstanding the patient frequently looks healthy, and sometimes, even robust; but a close investigation shows that the good health is only apparent, and is readily disordered by the most trifling causes. Thus, as it is observed by Lallemand:—"The persecution of the friends and relatives of such patients only aggravates their misery, by recalling to their recollection the bitter truth which they are unwilling to own. Often have I heard such persons exclaim, 'Oh, that I were thin and yellow, that I had the appearance of a sick person; then I should be pitied, and permitted to follow my own inclinations!'" I have often met with similar cases; and I have, at this moment, four, in all respects similar to those noticed by Lallemand. When the disease has arrived at its advanced stages, the veins of the testicles become varicose; and give the sensation to the touch as if the scrotum contained a number of thick hardened cords. I have met with many cases, in which the enlargements have been so great and so extensive, as to compel the patient to wear large trousers to hide the deformity. Well regulated pressure will very soon relieve this inconvenience.

Stammering is not a very unfrequent accompaniment to spermatorrhœa, especially in young persons. Indeed, various alterations occur in the voice, and which can be readily traced

to indulgence in masturbation. There is also a feeling of weakness or oppression at the chest.

Epilepsy is a frequent consequence of masturbation; and I have seen more benefit result from cauterization of the urethra in epilepsy, than from any of the numerous remedies recommended in this very serious and obstinate disease. Most of the epileptic patients who have fallen under my care, have suffered to a greater or less extent from spermatorrhœa. Neuralgic affections of a very painful description, are often concomitants of spermatorrhœa.

Vision is frequently impaired when the patient has been suffering for any length of time from spermatorrhœa. The eyes look dull, watery, and heavy; the pupils become dilated; black spots seem to float before the eyes, and such persons are incapable of looking a stranger full in the face. Masturbators become alarmed when the sight becomes much impaired, and are frequently by fear prevented from indulging farther. Many of my patients have assured me that the impaired vision was the first sign to warn them of the evil effects of masturbation. By discontinuing this practice, they found they became much better.

It must not, however, be disguised that true amaurosis, or paralysis of the retina, sometimes supervenes, and produces partial or complete blindness.

When the disease has thoroughly taken root, there is a moroseness of manner, and a gravity which might be mistaken for the seriousness of deep thought, and the calm of penetrating reflection. But a moment's investigation is quite sufficient to unravel the whole mystery, and expose the real condition to the experienced judgment. There is a vacancy, an abstraction of thought quite incompatible with serious reflection. Nothing can engage the attention; no mirth, no amusement can dispel the fixed and unflinching gloom.

This condition is not natural to the patient, nor consistent, or even reconcilable with his former habits. A serious alteration of character, although its successive phases have been overlooked, has been gradually though slowly developing itself. The phenomena are now too obvious to be passed over unobserved. The patient presents no tangible form of disease; and in the doubts and difficulties of the case, cachexies of

various characters are apprehended, and ignorance contents itself with "going into a decline," or some other equally formidable malady.

Since the former edition of this work, I met with an instance corresponding precisely, in almost every particular, with the foregoing description.

CASE.—I was consulted about a young gentleman, sixteen or seventeen years of age, who about eight or nine months before had returned home from a boarding school, where he had been for several years. It was intended to send him to the university, and his preliminary education having been completed, he had returned home to enjoy a little recreation previous to engaging in the higher departments of study.

He had not been at home more than two months, when a sensible and marked change in his character took place. He had become indolent, apathous, gloomy, and solitary. He avoided society; abandoned sporting and other amusements, to which previously he had been much devoted. He spoke little, and renounced, so far as he could, all his former associates. These extraordinary alterations were at first matters only of speculation. Disappointment, unrequited love, or some unworthy misplacement of his affections, were each in their turn accused; but when brought to the test were found to be perfectly innocent of the charge brought against them.

At last matters became so serious, though inexplicable, that it became necessary to defer his going to the university. The professional attendant of the family was summoned to explore the circumstances, and assist with his counsel and advice. This gentleman apprehended phthisis, and expressed himself fearful that consumption would make its appearance at some no distant period. Of course in a case of such importance speculation was out of the question, therefore many professional gentlemen were consulted in succession; and many and various were the theories broached, and the opinions delivered. At the recommendation of a patient of mine who happened to be intimate with the family, I was called in to see the case. I now proceed to detail his state at the time of my visit.

His general appearance was unhealthy, although no special form of disease was particularly evident. The countenance pale, sallow, and somewhat flabby looking. The eye dull, and heavy looking, clearly betraying a considerable degree of vacuity. The attention wandering and unsettled. The mind weak, and the intellect evidently impaired.

The animal powers were in a similar languor: a complete indisposition to the slightest exertion. It was not without some trouble that he could be induced to attend, or reply to the questions put to him concerning his health. He seemed desirous of avoiding the fatigue of satisfying the inquiries made of him. Hence his answers were delayed, and when at last given, peevish and fretful. The whole of these phenomena were distinct and clearly observable; but yet when closely investigated, could be traced to no apparent cause. On examining the different organs and structures, to no one could a morbid condition be clearly traced. There was unquestionably a state of ill-health, but for which conjecture even could not assign any reasonable cause.

I had become from experience familiar with such cases, and the appearance alone of this patient, from the first excited my suspicion. This was converted into certainty upon observing the careless, peevish, and impatient manner of his whole deportment. I therefore inquired if he was not subject to frequent urethral discharges. You are subject, I continued, to *involuntary emissions*, sometimes at night, sometimes in the day, and at times at both periods. At last he admitted the fact; stated that he did not clearly understand either the nature or the cause of his complaint, but that latterly he felt very much altered, and very unwell without any reason. It is, perhaps, hardly necessary to state further, that upon microscopical examination the urethral discharge was loaded with spermatozoons, which were also found to exist frequently in the urine, and that the case was clearly one of *spermatorrhœa*. The plan of treatment detailed in another part of this essay was adopted, and with success.

There is, however, always one constant attendant, and that is, a disordered condition of the genito-urinary system. If this be inquired into, we shall find evidences sufficient to satisfy us of

the nature of the complaint. A discharge from the urethra of a thin watery fluid, will frequently be observed, which will be increased in quantity after a bulky or hard stool : the desire for sexual indulgence gradually diminishing. The linen in these cases is almost always stained. But the stain is white, and more like that from diluted albumen or white of egg. Examined by the microscope, the seminal character of the fluid is placed beyond the possibility of doubt. It is a fact, well known to physiologists, that the semen in the male abounds in minute animalcules, named "*spermatozoa*," the shape and active movements of which the microscope alone can disclose to our view. They present the appearance of a sort of flattened ellipse, terminating in a kind of thread-like spiral tail. The oval part is perfectly transparent. They measure in length about one-fiftieth of a line. In the same fluid are seen a number of granular colourless corpuscles of a roundish form. They vary in number, but are much less numerous than the spermatozoa. The whole are suspended in a colourless, clear, transparent fluid, termed "*liquor seminis*." In cases of the description under consideration, they are seen on the linen, and also constantly in the urine, in which it is asserted by Wagner, they are never seen when that fluid is in a healthy state.

When spermatorrhœa is suspected, the last drops of the urine should be always examined, to see if it contain any seminal fluid ; and more especially, if at the same time, there be any habitual discharge from the urethra. The urine which first passes, will wash away this discharge or any other accumulation, leaving the last drops free from any other foreign admixture. But further, a greater pressure is exerted upon the vesiculæ seminales, while the bladder is contracting powerfully, to expel the last drops of the urine.

Even though the patient may suffer from diurnal pollutions, there may be no appearance of seminal fluid in the urine, for it should be recollected that the quantity secreted, is much more abundant at times than at others, and that at times it is altogether suspended. Consequently at these times the seminal fluid will not be detectable in the urine.

The morning urine generally contains the largest quantity,

especially if the patient during the night have had lascivious dreams, or had been in the company of females, or had been reading books calculated to excite voluptuous or otherwise lascivious ideas.

In this state of things—that is, when the patient suffers from both nocturnal and diurnal pollutions, he very seldom has any offspring; but if there should be issue, after very close and attentive observation, I have been led to the conclusion, that the children under these circumstances prove weak and very unhealthy, and for the most part die before they arrive at maturity. But when the disease has existed for some time the power of impregnating becomes extinct, indeed altogether impossible; for not only are the spermatozoons broken up, but the emissions are weak and precipitate, so that the seminal fluid cannot be ejaculated with the requisite force, which ought to be sufficient to drive it to the *os uteri*. The erections are not only incomplete in themselves but of too short duration; and the ejaculation has taken place long before the uterus and fallopian tubes can be sufficiently excited. The spermatozoa, too, in such cases, are either imperfect, or their motions are weak, slow, and cease very soon; and themselves soon perish. When such incomplete development arises, as it often does, from too rapid formation; if, under such circumstances, the emissions be prevented, the secretion becomes more healthy, the desires more natural, and the erections more energetic and continuous, so as to enable the sexual congress to be complete. As illustrating the advantage of attending to these matters, I may adduce the following case:—

CASE.—The friends of a gentleman preparing for one of the learned professions, consulted me respecting the state of his mind. They observed that his memory had become much impaired, and his intellect much affected. He had latterly evinced a distaste for all those amusements which he formerly enjoyed, and what was still more strange, he had taken an utter dislike to the fair sex! He repeatedly declared that he envied the man who cleaned his boots, and wished it had fallen to his lot to be the servant. He distorted the most trifling incidents,

and magnified to the utmost every disappointment or vexation, however trifling in its nature. He became morose in his temper; his disposition suspicious; a haggard and sickly appearance; a wild vacant look, which, together with all the marks of a completely broken down constitution, induced his friends to think seriously of placing him under some restraint, and it was at this period that I was applied to.

I was informed that, in consequence of the symptoms from which he suffered, at one time resembling those of an affection of the heart, at another of the lungs, the stomach, the head, &c., he had undergone the varied routine of treatment for these different disorders, without, at the end of several months, any permanent benefit. Upon inquiry, I learned that for some time past, stains, of a peculiar description, had been constantly observed upon the body linen which he had worn; and his friends looked upon this as the effect of some illicit intercourse which, preying upon his mind, they apprehended might be the true cause of his mental state and bodily infirmity. On examination, I found the urine remarkably pale; specific gravity 1.009, and its state in every respect very abnormal. But the most remarkable appearance was that of spermatozoa. When a portion was transferred to the field of the microscope they were seen in a sort of thin wheyish looking fluid; they were also found in the stains upon the linen, but a very few of them in a perfect state, the tails of most of them being broken off.

Being thus possessed of the nature of the case, and the real cause of this gentleman's melancholy condition, I told his friends that I entertained some hopes he might be cured; but they had been so often told the same thing, and so often disappointed, that they were unwilling to enter upon any schemes, as they termed it, looking upon an asylum as the only suitable refuge. However, upon a somewhat more candid explanation, their reluctance at last gave way.

Upon an interview with the patient himself, I declared to him my conviction, that if he steadily adhered to my instructions, he would ultimately regain his health and strength. I then told him that I had ascertained the real cause of all his illness, and delicately hinted to him my suspicions of its nature; namely,

excessive indulgence in a solitary vice. At this, however, he was very indignant; protested most solemnly that he had never indulged in any practice of the sort; and denied that he had ever done anything capable of bringing on disease of such a description. I urged, however, the unerring nature of my investigation, announced the appearance of the spermatozoa in his urine—an infallible proof, as these animalcules were never seen in natural urine; and lastly, I urged the stains observed on his linen, and the evidence of the presence of those animalcules in a mutilated state in the fluid of these stains; that these facts left no room whatever to doubt the nature and cause of the debility from which he was suffering. It was ultimately arranged that he should be placed under my care.

I commenced the treatment of this case by administering sedatives to allay irritation, and steel to give tone to the general system. I cauterized the urethra in the manner recommended by Professor Lallemand of Montpellier, and described in another place, which was attended with the most surprising success. A discharge which invariably followed the emptying of the bladder, or the evacuation of the bowels, as well as the oozing from the urethra itself, after a short time began to give way, and ultimately disappeared. The general health greatly improved, and was completely restored in about five months, when he left town to resume his studies at Cambridge.

After the lapse of several months, this gentleman again consulted me, of his own accord, stating that some of his former symptoms had returned. The treatment formerly pursued was again adopted, but without the same success; and at last I began to suspect that he was again pursuing his former vicious habits. I now directed the *unguent. antimon. potassio-tartrat.* to be rubbed on the penis, till the usual eruption was brought out; the irritation so excited prevented indulgence in his former bad habits, the part being so sore that he could scarcely endure the slightest touch. The use of the ointment, so as to keep up the necessary irritation, was continued for about six weeks, during which period his general health greatly improved, the discharge from the urethra ceased, all the bad symptoms vanished, and his health remained completely re-established for

a considerable time. Fearing, however, that he might again abandon himself to his former practices, I strongly urged marriage to him, observing that he would thus substitute a natural excitement for a most unnatural, pernicious, and destructive indulgence. He fortunately followed my advice and got married, and I have every reason to believe that his lady is at this very moment in the way “that ladies wish to be who love their lords;”* and farther, that the gentleman himself is in excellent health.

This patient since confessed to me, what nothing could induce him to admit before, that my view of the nature and cause of his disease was perfectly correct. That he had so indulged and so addicted himself to masturbation, that he found it utterly impossible to resist the temptation, though fully sensible and thoroughly convinced of the ruin which he was entailing upon his own constitution. He assured me that he more than once contemplated suicide.—This case is interesting, as showing the ascendancy which bad habits sometimes acquire over the resolution. Such patients conceal their propensities from the shame and disgrace to which it exposes them. The above gentleman would not confess nor yet abandon his mal-practices. The rubbing in of the *ung. antim. potassio-tart.* upon the penis is one of the most effectual checks, and it is astonishing how the health improves so long as the irritation be kept up; but the great difficulty is to get the parties to persevere. They readily try the ointment at first, but it is difficult to induce them to repeat it.

Sometimes, especially in older subjects, this disease terminates fatally, bringing on the symptoms of apoplexy, or some affection of the brain, although upon dissection afterwards, there is no apparent derangement to be found in the head. The following case will illustrate the fatal effects of unnatural indulgence:—

CASE.—In June, 1842, I was sent for to visit a gentleman residing in one of the northern counties of England, and who, as it was supposed, was suffering from an affection of the brain.

* This expectation proved well founded.

Coma, however, had set in before I arrived, and he died in a few hours after. From his medical attendant I received the following history:—

For two years before his death, the health of this patient, which had been declining for some time previous even to that period, had been giving way rapidly, and was nearly broken up. He had a discharge from the urethra, which was much increased in quantity whenever he passed urine or a motion; total *anaphrodisia*; with a haggard, pale, and peculiar expression of countenance, which, with several other circumstances related, induced me to suspect the presence of the disease under consideration, and to look upon the affection of the head as a secondary and not the primary disorder. I cannot state the condition of the brain, nor indeed of any other of the internal organs, as the friends would not upon any terms permit a post-mortem examination; which, had they allowed, I feel satisfied that the genito-urinary system would have presented the most marked morbid appearances. He had been taking copaiba, cubebs, also a variety of diuretics and astringents, as well as using injections for the urethral discharge, though without any benefit; for, as far as I could learn, the urethral discharge seemed to have engrossed all the therapeutical attention. But what I look upon as the most certain characteristic of his condition is, that having obtained a small quantity of the discharge from the urethra upon a glass slide, on placing it in the field of the microscope it was observed to contain spermatozoa. I unfortunately could not obtain any of this patient's urine.

The influence of this disease upon the functions, and probably the organic condition of the brain, is well attested. Nor is it the brain alone that becomes involved. Lallemand states, that it was from the number of patients who consulted him for supposed organic affections that his mind was more particularly directed to the study of these pollutions. The organic affections, however, at the commencement have not completely established themselves; they exist only in appearance, or rather as it were, embryo. The symptomatic phenomena are the results of a sort of sympathetic excitement, the immediate forerunner of irritation, which once established in an organ, and which left

uncontrolled in its progress, at last invades the structure; "*nec sinit gradum*," nor stops its progress, till it has sapped the foundation, and effaced every trace of healthy structure.

It is soon observed that the memory becomes impaired, and the thread of ideas easily interrupted, and that the least mental irritation causes an afflux of blood towards the head. The pulse is weak, feet cold, followed by a feeling of general uneasiness, anxiety, and agitation.

There is a tendency to repose, to drowsiness, and it is with difficulty that the patient can be induced to rise early in the morning, and he feels stupid for some time after he gets out of bed.

Affections of the brain are not always of this character. Dr. Smith thus expresses himself:—"The constant association of sexual disorder, and more or less of generative incapacity with mental derangement, whether cause or effect, is a remarkable fact, and one which appears to me not generally known; yet, I will venture to say, that every insane individual, whether male or female, is at the same time also suffering from some sort of procreative disability, defect, or disorder, either impotency, sterility, or both, and the removal of the one affection would often seem to prove immediately curative of the other."*

Since a former edition of this essay, several opportunities have been presented to me of examining minutely into the condition of patients, the inmates of asylums, and suffering from various degrees and kinds of *mental* aberration. It is a very singular and no less remarkable fact, that the urine of a tolerably large majority of the males, on examination, was found to contain spermatozoons. This fact seems to prove an intimate connection between insanity and spermatorrhœa, although at present I am not quite in a position clearly to trace the relation. It shows also the necessity of a closer investigation; indeed, I feel satisfied, were the subject sufficiently examined, much might be done for the relief of the unhappy victims of mental diseases, an assertion fully corroborated by the excellent observations of Dr. Smith.

* Smith's Miscellaneous Contributions.

CASE.—A gentleman who consulted me, gave me the following account:—

He had suffered repeatedly from attacks of gonorrhœa, which always proved most obstinate and difficult of cure. Upon each occasion he invariably found it necessary to submit to medical treatment for five or six months, before the discharge from the urethra could be subdued. Upon several of these occasions, he suffered from swelled testicle, the last attack having produced a most irritable state of the bladder; compelling him to pass water much more frequently than when in health—perhaps, seven or eight times, and he was constantly obliged to get up during the night to void the urine. The urine generally deposited a whitish sediment, but occasionally left a reddish stain upon the utensil.

General health remarkably good, complexion florid, and his look and appearance in every respect healthy; but at last he became conscious of *involuntary emissions*. The constant desire to empty the bladder; the irregular and involuntary seminal discharges; the desire and power for sexual intercourse gradually declining, and the incapability of erection, induced him to consult some of the most eminent men in the profession; many of whom treated him as an hypochondriac, assuring him that all his symptoms were only imaginary, and that his recovery would be almost immediate, if he could but cease to brood over his visionary complaints. Others again, directed sedatives and tonics, which relieved for a time, but no sooner were they discontinued, than the symptoms returned and re-appeared as bad, or even worse than ever.

At the time he became my patient, the general symptoms were pretty much as detailed above. The urine, however, I found remarkably pale; neutral, or even alkaline, specific gravity low, with a large quantity of epithelium, and occasionally, pus globules. But the most remarkable property was, that on being allowed to subside, the sediment was found loaded with *spermatozoa*.

I introduced a sound to ascertain the state of the urethra, and I found the prostatic portion painful and remarkably sensitive. The right testicle was in a state of complete atrophy, so small

as to be scarcely recognized. Whenever he went to stool, he passed the seminal fluid in remarkably large quantities; and the slightest venereal excitement produced an emission, before erection or any gratification of the desire.

I prescribed sedatives to allay irritation, and the mineral tonics to give tone to the sexual organs and the bladder; at the same time strongly recommended the application of the cautery to the urethra: and to this at the moment he consented. I gave him, however, for the interval, a prescription, which, unluckily for himself, he took for preparation to a surgeon keeping a shop, who endeavoured by every sort of misrepresentation, to excite his fears, and so alarmed him, that he objected to the cautery. I heard nothing more respecting his complaint, nor its progress, for he carefully avoided all allusion, and I felt no way disposed to introduce the subject.

In 1846, however, I was summoned rather unexpectedly by some of his friends, to report upon the state of his mind. A very short interview sufficed to render quite apparent this unfortunate gentleman's unhappy situation. His friends referred the obvious symptoms of insanity to a "matrimonial disappointment," the effects having been greatly aggravated by excessive indulgence in wine and other stimulants. His proceedings became so extraordinary, that it became necessary to place him under restraint, the medical gentleman to whose care he was committed, assuring his friends that quietude, depletion, and the withdrawal of all stimulants, would speedily restore him to health. This, however, unfortunately did not prove to be the case, and he was, in consequence, removed to what was considered a more healthy situation. The change of air, and a more beautiful scenery effected a slight improvement, but only of short duration. I then proposed to call in Dr. Sutherland, whom I met in consultation. He, after a very careful examination, gave it as his opinion that the patient was suffering from "softening of the brain," an opinion confirmed by the Commissioners of Lunacy, all gentlemen of the highest repute upon the treatment of insanity. Naturally influenced by such high authority, I hesitated to practise cauterization upon my own and sole responsibility, more especially the cause of the dis-

ease being pronounced softening of the brain. Dr. Sutherland prescribed alteratives, which were carefully administered under the superintendence of a very intelligent surgeon, the son of Mr. Birkett, the proprietor of the Northumberland House Asylum, where he had been placed, or rather to which he had been transferred.

At length paralysis supervened; the general health declined, he became helpless, and most fortunately, mentally imbecile and senseless, and at last, sunk the victim of his remorseless malady. By permission of his friends, the body was submitted to anatomical examination, which was conducted in the presence of Mr. Birkett, Jun., myself, and another professional gentleman.

The *brain* and *spinal marrow* were sliced into the thinnest possible layers, and these very minutely examined by Mr. Birkett, an excellent and practised microscopical observer, and were found remarkably healthy, the heart, lungs, liver, and abdominal viscera generally, perfectly free from all appearance of disease.

The bladder unusually small and contracted, the muscular fibres, however, well developed. The mucous coat highly injected, and of a rose-red colour, more especially about the sphincter and trigone. From the prostate, when cut into, a muco-puculent matter exuded. The ejaculatory ducts were patulous, and many of the hardness and consistence of cartilage. The testicles not even half the natural size, and of a pale and nearly bloodless appearance. Vesiculæ seminales enlarged, but soft and flaccid, and when cut into, poured out a muco-puculent looking matter.

OBSERVATIONS.—I presume it is only necessary to read the above history, and bestow a moment's reflection upon the morbid appearances, to refer the whole of the symptoms and the unfortunate result of this case, to the derangements of the generative system. I, by no means, infer that the morbid conditions in the structures of this system, abstractedly considered, would account for either the paralysis, the insanity, or the fatal results; but we know that the generative functions exert such actions upon the nervous system, as to incapacitate the latter for

its due share in the economy of the system, and this without any *recognizable* change in its structural appearance. No change of any description, no morbid alteration of any kind whatever, could be detected in either the brain or the spinal marrow; and the most serious disorders of the nervous functions in a large proportion of instances of severe nervous diseases, even fatal ones, present phenomena of an equally negative character. It next becomes a matter of inquiry, speculative, certainly, whether if cauterization had been practised at a sufficiently early period, a different result might not have been fairly expected. I have seen so many similar cases in which the cautery has been followed by very different results, that I cannot divest myself of the belief, that had the urethra been cauterized, and due tone thus given to the genital organs, that in this case, a more favourable issue might have been the result. Be this as it may, the history has been faithfully detailed, the facts clearly stated, and it must be left to the profession to draw from these their own conclusions.

To sum up in a few words:—The symptoms of this disease appear at no definite period, but at times, varying in length, according to circumstances, after the continued operation of some of the causes hereafter to be enumerated. The symptoms at first are apparently general; the strength begins to fail, and the constitution seems to be breaking up; the patient feels neither very ill, nor yet in a state of health very satisfactory to himself, and still he knows not of what to complain most. Nor is it his bodily strength alone that seems affected; his mind appears to be involved in the general debility. He either is extremely irritable, apprehensive, morose, or suspicious; or he becomes unhappy, melancholy, desponding, avoiding all sorts of social intercourse, even that of his most intimate friends and relations. He shuns every acquaintance, seeks solitude and retirement, and in a sort of vacant mental abstraction, broods over—he knows not what.

During all these various revolutions in the general system, corresponding changes in the general appearance and countenance gradually but steadily unfold themselves. The figure becomes altered, the patient emaciates, the weakness becomes

evident in the stoop : the low and rounded shoulders falling in upon the chest ; the pale sharpened features, the haggard look, but too clearly denounce the hidden mischief. Every intimate perceives the change—many remark upon it, to the serious annoyance of him most interested, the actual sufferer. But, notwithstanding, inquire the cause of all this—investigate the health ; the appetite is as usual, there may be slight thirst, the tongue perhaps a little coated in the morning, a slight feverish condition not constant, but appearing only occasionally upon the application of some slight cause, as exposure, sitting up late, &c. ; but no other assignable reason for apparently such serious inroads upon the health. This gradual decay, proceeding from no apparent cause, goes on, lamented indeed, but unexplained ; till at last some, more sapient than their neighbours, discover that the poor sufferer “is going fast into a decline.” Now the grand discovery is made, the secret revealed, the mystery cleared up, and all become resigned to a calamity they feel they cannot avert.

But now new phenomena present themselves to swell up the list, and aggravate the bitter category of human ills. Nervous trepidations of a formidable character render the situation of the patient very precarious ; or perhaps he is suddenly seized with the most violent palpitations of the heart, at first appearing only at intervals, but soon repeating their visits with fearful frequency ; a slight cough, with a sense of constriction in the chest, precedes the general breaking up. This cough (a cold from some slight exposure), soon to disappear, seems disposed, however, to be obstinate, and to retain possession. Nay, it increases in violence ; it is more troublesome ; it harasses both day and night, and phlegm makes its appearance, at first frothy and mucous, but afterwards becoming greenish, or yellowish,—in a word, purulent. Sometimes blood appears ; either a true hæmoptoe, or a mere sanguineous exudation colouring the sputa.

But, perhaps, as more frequently happens, signs of cerebral derangement show themselves, Head-ache, periodical at first, but afterwards becoming a sense of tightness, with obtuse pains. Paroxysms of delirium succeed, and these of the true maniacal character, ultimately terminating in confirmed, perhaps imme-

diate insanity, The patient, suffering from some one or more of these symptoms, yields at once overwhelmed by their violence and severity; or ekes out a lingering, miserable existence, and ultimately sinks into the tomb, the victim—perhaps the unconscious victim—of his own vices and his own follies; carrying with him unrevealed the secret cause of a premature descent into the grave.

Such is not unfrequently the course of this disease; the unsuspecting friends, wholly unconscious on the one hand, and the sufferer's own sense of shame on the other, contribute to preserve a secret, the timely disclosure of which might have been attended with widely different and more happy results. But, having surrendered himself entirely to a most pernicious habit, till it had gained such an ascendancy that anything like self-control, and resistance to the fatal and degrading propensity, were no longer within his power, the votary of solitary vice at last wholly abandons himself, and ashamed to acknowledge his follies, finds in an early tomb the only refuge from his sufferings—the only hope—the last, though sad and melancholy prospect of burying at once his reflections and his remorse. But, perhaps, it is now high time to draw the veil over these mysteries, and to drop the curtain on scenes, the farther contemplation of which can only tend to excite the most painful reflections, without any prospect of utility or advantage.

CAUSES.

The causes of impotency are varied, and present almost insurmountable difficulties to anything like methodical classification. Physical defects may be either congenital or acquired; or they may result from injuries or mutilation. A physical defect, such as a total or complete non-development, obliteration, organic changes of parts essential to the procreative faculty, &c., would prove a cause of impotency, though not of absolute sterility. Some of them may be congenital, but some of them must have been, of necessity, acquired. The fertility of the male, it is now well ascertained, depends essentially upon the spermatozoa already alluded to, and if they be absent,

no physical perfection can compensate their loss. Persons have been known, who have passed a life—and even a long life—without evincing, or probably feeling the slightest desire: what can be the cause of this unnatural insusceptibility? Be this what it may, Sir Astley Cooper has described the condition of such frigid mortals in clear and perspicuous, though highly poetical language:—"To such persons a Venus might display her charms, and on such her son might exhaust his quiver in vain. No genial spring is here, no blooming summer or fruitful autumn; but all is winter—a dreary, desolate, and barren winter—in which the springs of life are frozen up, and the animal propensities destroyed."

Injuries of the back part of the brain frequently cause partial or complete impotency. To the cerebellum has been assigned the seat of sexual desire. If injuries of this part of the cerebral mass can induce incapacity in the procreative functions, there is no difficulty in comprehending how organic lesions, hereditary or acquired, may lead to the same results. Persons are sometimes seen, as already observed, impotent from the first, and this morbid condition, traceable to no cause whatever during life. In such cases, if the cerebellum be examined, it will often be found in a diseased state, indeed sufficiently so to account for the generative inability. I have seen one remarkable case of this description, the general particulars of which is all that I can relate.

CASE.—I am indebted to a gentleman, and in extensive general practice, for the opportunity of watching the following case, clearly demonstrating the connection between the testicles and cerebellum. A porter, in a wholesale grocer's establishment, was engaged in arranging some goods close to the handle of a crane. At the time a heavy weight was attached to the crane, which was locked or fixed; but by some accident the handle got loose, and revolved with immense velocity. In one of its revolutions it struck the unfortunate man on the lower part of the head, over the region of the lobes of the cerebellum. He was stunned by the blow, and remained insensible. By stimulants he was restored to a state of *temporary* sensibility.

He soon, however, became convulsed, and remained insensible for ten days, notwithstanding the most active treatment. There was great difficulty in getting down a small quantity of beef-tea to keep him alive. The bladder could not expel the urine, and it became necessary to draw it off daily with the catheter. Ultimately his mental powers were restored, upon which he was greatly astonished to find that the testicles had become completely atrophied, or, as he expressed it, "withered away to nothing!" Alterative medicines having been administered, and the mouth having become tender, we were agreeably surprised on observing that the testes gradually resumed their natural appearance, and recovered their tone. I have had opportunities of seeing this patient once or twice since, and I learned that his recovery has been complete.

Irritation of the cerebellum often proves a cause of pollutions. This condition of the cerebellum is generally attended with a foul tongue, and very irritable state of stomach; producing great sickness, and many other of the symptoms already noticed. Patients suffering under such circumstances, are constantly indulging in some one or other lascivious notion. They picture to themselves all kinds of obscene and disgusting ideas. A patient, who came a very long journey from the country to consult me, in consequence of suffering in this manner, stated, that every female he met, excited sensualities, which increased to such a degree, that he felt fearful of trusting himself alone, even in the presence of an old and faithful female domestic. With the view of diverting his attention, he applied himself most diligently to abstruse subjects. He read some of the most pious works, in the hope of altering the condition of his mind, and changing the current of his thoughts. But all failed to exert the slightest influence upon his disordered imagination; or his propensity to dwell upon, and brood over, those painful thoughts. All was in vain.

He complained of a feeling of heat, and tightness in the back part of his head, in the region of the cerebellum. These feelings were much increased whenever he came to dwell upon the morbid train of thought, to which he felt so irresistibly disposed. I have met with several similar cases, but not of so much

severity. They are relieved most speedily and effectually, by local bleeding; cold applications to the back of the head, in the region of the cerebellum; and attending to the secretions. This plan I adopted in the present case, by which the patient was very much relieved, and much to his surprise, on the relief of the cerebellar irritation; his health was restored, and his recovery complete.

Persons in the above condition are often tempted to give way to certain unnatural propensities, especially while under the influence of a paroxysm of cerebellar irritation. Thus I have known some, who at times, felt the greatest inclination to commit a rape, if opportunity should present. One was inclined to precipitate himself from a window, or down a precipice; another to throw himself on a railway; not, as they have declared, from any desire to destroy themselves, but impelled as it were, by some unaccountable impulse. A few have acknowledged, with the most intense feeling of distress, a propensity or desire to indulgences of a most unnatural and disgusting nature, which I shall not more particularly specify.

But it is not to original defects that I wish so much to direct attention, but rather to causes which are more frequent, and which being more under control, are more properly the objects of pathological and therapeutical investigation. In this point of view, we may set down, as one of the more important, an excessive indulgence in sexual intercourse. It would be difficult strictly to define excessive indulgence; thus what would prove the very height of excess to one person, might prove to be but moderate excitement to another. Celsus tells us the sexual appetite ought to be indulged, using only moderation. Moderate, it invigorates the body, but in excess, it relaxes it: his words are—*“Concubitus vero neque nimis concupiscendus, neque nimis pertimescendus est, rarus corpus excitat; frequens, solvit.”** But he further tells us, that excess does not depend upon the repetition or frequency, but upon the state of the constitution. *“Cum autem,”* he observes, *“frequens non numero, sit, sed natura, ratione status, et corporis, scire licet, eum non inutilem esse, quem corporis neque, languor, neque dolor sequitur.”*†

* Cels. De Medicina, Lib. 1, Cap. i.

† Ibid.

I must confess, however, that I regard excess to consist more in the circumstances of a very promiscuous intercourse, than in what abstractedly might be considered such. A promiscuous intercourse debilitates much more effectually than fidelity to one and the same person, however frequent the gratification. We know, that with the other sex, barrenness, or if fertility exists, that it remains dormant and inactive, is the almost inseparable concomitant of promiscuous indulgence. Hence we find that women of a certain class seldom conceive. Even young females, who engage, at their first set out, in general and unrestricted prostitution, prove sterile during the period of indulgence; yet there is reason to believe that in these cases the procreative faculty is rather suspended than destroyed. Indeed, we know that in many this is the fact, as we often see these women get married; and becoming more continent or faithful to one individual, have healthy children, and even large families.

ENLARGEMENT OF THE PROSTATE, I am satisfied from very extensive and careful inquiry, is frequently brought on by long continued diurnal pollutions; and when we reflect upon the fact that the spermatic ducts open into the prostatic portion of the urethra, as shown in Plate IV, we can have no difficulty in understanding how long-continued and neglected disease of a part so closely and intimately connected with this gland, should ultimately lead to disease of the organ itself. I have been consulted by a great number of elderly gentlemen, in consequence of irritability of the bladder, attended with frequent desire to pass the urine, which escaped by drops. They felt a fulness in the perineum, with tenesmus, or a desire of going to stool, with violent straining, nothing passing off, as the bowels were empty; and indeed, they experienced the various symptoms indicative of chronic enlargement of the prostate. In such cases, I have frequently found the last drops of the urine abounding in spermatozoa.

I have been enabled to trace the origin of the symptoms, in many of these cases, to excessive indulgence in early life, in masturbation; repeated gonorrhœa; and venereal excesses. All such persons assured me that they experienced more benefit from the suppression of the seminal discharges, when I had succeeded in

this object, than from any of the other modes of treatment previously adopted, and very many of them had been under the professional care of the most eminent surgeons in the metropolis.

Another cause is venereal affections, including—

GONORRHŒA, especially if inflammation should have extended to the testicles, I have frequently found to produce diurnal pollutions. For after the inflammatory action has subsided, the ducts are left patulous and passive. Since the last edition of this volume, I have met with forty-two cases distinctly traceable to this cause. Some of these patients experienced diurnal pollutions after the first gonorrhœa; others did not suffer till after repeated attacks of gonorrhœa. They all first complained of a feeling of fulness, pain and heat at the neck of the bladder, attended with straining and spasm, which often forced away a considerable quantity of a thickish, sticky matter, along with the last drops of the urine. Very shortly after this, they noticed that the desire for sexual intercourse diminished. A thick cloud was observed to be deposited by the urine after it had been allowed to stand for some time. They complained of what they named an “obstinate gleet,” most apparent in the morning, and greatly increased after a hard stool. This annoyance had baffled the skill of their surgeons; and notwithstanding the numerous remedies tried for their relief, it still continued, and it was for this disorder they applied to me.

Upon examination, the discharge from the urethra in all these cases, was loaded with spermatozoa. The disorder was soon removed by preventing the escape of the seminal fluid, and the desire for sexual intercourse soon returned. I have met with numbers of somewhat similar cases; but as certain of them had indulged in masturbation, it is impossible to decide how far the symptoms were referable to gonorrhœa,—how far to masturbation.

Venereal attacks act not only upon the system at large, but also upon the procreative organs. In some instances, perhaps, the remedies employed in their cure may have a marked influence, and such effects have been, and perhaps not incorrectly, attributed to mercury. Sometimes the disease is not eradicated,

but lies dormant, and may appear after its effects in producing genital debility have manifested themselves, as may be illustrated by the following case:—

CASE.—In February, 1842, a gentleman consulted me, stating that he had lost all desire for sexual indulgence. He remained under my care for a considerable time without experiencing any benefit whatever; I now determined on exhibiting the hydrargyri bichloridum, which I first saw used in Germany; but before entering upon this new plan I proposed to him to consult Sir Benjamin Brodie, to which the patient having agreed, we called upon Sir Benjamin. The circumstances of the case having undergone a close investigation, it was resolved that the bichloride should be immediately commenced.

Sir Benjamin, upon this occasion, stated to me that he had seen several cases of a somewhat similar description, in which he administered this remedy with great effect. One in particular, was that of a gentleman who had served in the Indian army, and returned to England in consequence of finding himself impotent; the bichloride was given with marked success.

In the case under consideration, on examining the testicles, the epididymis in both felt indurated, thickened, and hard. Shortly after our visit to Sir Benjamin Brodie, the patient complained of sore throat, which, on examination, was found to present a very suspicious appearance; copper coloured blotches also broke out, and appeared on different parts of the body. The remedy, however, was continued, and decoctum sarsæ directed at the same time, under which plan, not only the ulcers in the throat healed, but the eruption vanished. The dose of the medicine was a little increased, by which the induration of the epididymis disappeared, the desire, as well as the capability for sexual intercourse returned, and with the exception of a little debility, which continued for some time, he perfectly recovered.

Here we may clearly connect the sexual inability with the venereal taint, affecting the condition of the testicle, more especially the epididymis; indeed, in most of these cases, I constantly find the epididymis in an indurated, and sometimes knotted state, and so long as this continues, impotency and

spermatorrhœa, or seminal weakness, will be the consequence. Venereal and gonorrhœal affections, when they involve the testicle, are more likely to be followed by such results, as perhaps will be fully exemplified in the history of the following case:—

CASE.—A gentleman, twenty-five years of age, fair complexion, blue eyes, narrow contracted chest, but no hereditary disposition to consumption; father and mother living, and in perfect health; auscultation and percussion elicited the healthy sounds; on consulting me, gave the following history:—

About two years ago he contracted syphilis, and then suffered severely from orchitis. He could not positively state whether or not mercury had been given for the primary sore. He soon, however, recovered, and then went into the country. In about three months after his arrival at home, an eruption made its appearance upon the chest, which extended to the face, head, neck, and from thence speedily spread all over the body. For this, he consulted a gentleman practising in the village where he resided, who recommended an ointment to be applied to the spots, and some purging pills to be taken occasionally at bedtime. Under this treatment the disease somewhat improved for a short time, but it soon relapsed, and got worse again. He now consulted several other surgeons, but without any permanent benefit. A physician being at length applied to, directed the external application of zinc ointment; internally aloetic purges, and the vegetable tonics, with an occasional resort to blue pill and a black draught. This plan he continued for about eighteen months. But the disease, notwithstanding, gradually advanced, getting much worse. The throat becoming deeply ulcerated, the ulceration attacking the nose, tongue, and different parts of the body. There was a continual discharge from the urethra, and all desire, as well as capability, for sexual gratification were completely lost. In this state he was prevailed upon by a friend living in London to come up to town, and on the 30th of November, 1842, I first saw him.

Upon examination of the fauces, I found the tongue and throat deeply ulcerated, and the nose in the same state. Copper-

colour blotches all over the body; a constant running from the urethra; the testicles atrophied, soft, and pendulous; the epididymis in each indurated and somewhat knotty; urine remarkably pale, large in quantity, and of low specific gravity (1.010), not coagulable either by heat or nitric acid. The sexual appetite entirely gone, with a total inability for such indulgence; the spirits much depressed; the mental faculties impaired; pale, sallow complexion; violent palpitation of the heart; disturbed and sleepless nights,—he had not had a sound sleep for months; severe nocturnal pains, and apparently a complete break up of the constitution.

The plan I adopted in this instance, was the administration of the potassii iodidum, with the decoction of sarsæ, to be taken three times a day. The hydrargyrum cum creta and Dover's powder at bed-time. Under this treatment the general health soon improved; the nocturnal pains were relieved, and sleep procured.

But, notwithstanding these signs of amelioration, the ulceration of the throat, and the eruption on the skin, continued, and were little, if at all, benefited, although the treatment had been steadily pursued for a considerable time. I now substituted the iodide of mercury for that of potassium, which he took three times a day. The ulceration of the throat and the eruption on the skin rapidly improved under the use of the mercurial iodide; but I could not persevere, as I was obliged to discontinue it in consequence of the severe purging it caused. I therefore resorted to mercurial frictions, and restricted the internal means to the pulvis ipecacuanhæ compositus. The mucous irritation subsided, but the patient was reduced to a fearful state of debility, and his friends became greatly alarmed, fearful that he could not survive many weeks. In this emergency he was advised to abandon my plan of treatment, and place himself under the care of some obscure person living on Ludgate Hill, whom he consulted without acquainting me, and was told by him “that his disease had been mistaken, and consequently maltreated: that *he*, if he placed himself under *his* care, would cure him in a fortnight.” The gentleman, in consequence, called upon me to say, that he should no longer require my attendance,

upon which occasion, I first discovered exactly how the matter stood.

Upon a proper explanation, my suggestion to call upon Sir Benjamin Brodie for his opinion and advice, was agreed to, and ultimately adopted. Sir Benjamin pronounced the case "*a very bad one of secondary syphilis, somewhat modified by treatment*;" fully approved of the plan I had pursued; directed the mercurial frictions to be continued; the Dover's powders at bed-time; and what proved to me highly flattering, told the patient that "nothing better could be done for him."*

Confidence being thus re-established, the patient persevered in the mercurial frictions, till the ulcerations in the throat had completely disappeared. He was now put upon sarsaparilla and a course of tonics, by which his general health improved rapidly; the venereal appetite returned, and became so strong that he could not resist indulging it, notwithstanding the full recollection of how dearly he paid for his former imprudence.

Sometime afterwards, this gentleman again came under my care, suffering from gonorrhœa. Having relieved him, and being apprehensive of the serious consequences of further exposure to temptation, I advised him to return home into the country. I saw him some considerable time afterwards, when he told me he had never experienced a moment's illness after he left London.

Irritation from phymosis sometimes proves a cause of spermatorrhœa, as shown in the history of the following:—

CASE.—A young man consulted me, in consequence of nightly emissions, which recently had become so frequent, that they caused confusion in the head, forgetfulness; the memory becoming so bad, that he could not remember what it was absolutely necessary for him to recollect for the purposes of the ordinary business of the day. The consequence was, his dismissal from his situation. He also suffered from symptoms similar to those already so often detailed.

* On our return through the City, we called at Ludgate Hill, when I got a sight of the wonderful prescription which was to supplant my plans, and to my astonishment, found it to consist of one drachm of carbonate of soda, one ounce of tincture, and six of infusion of gentian.

At first, I attributed the disease to his giving way to *masturbation*, but upon an examination of the penis and testicle, I altered my opinion. I discovered that he had suffered from a very severe attack of gonorrhœa; which, after a period of many months, so far yielded to the treatment, that the discharge was suppressed. The foreskin, however, in consequence of previous excessive inflammation, could not be drawn back over the glans. I at once recommended the prepuce to be divided, which was done. When the prepuce retracted, and exposed the glans, there appeared a large quantity of a cheesy-looking substance, emitting a very disagreeable smell; and which occasioned a great deal of inconvenience by the irritation which it caused. I directed a lotion, consisting of solution of sulphate of zinc with tincture of opium, under which the patient very speedily recovered.

I have occasionally been consulted by patients who have never had sexual intercourse; and, upon examination, I have found phymosis present. In such instances, the testicles are remarkably small, and the penis very imperfectly developed. It is surprising to observe how, immediately after the operation for phymosis, and the patients have yielded to sexual desire, the sexual organs develop themselves, and assume their natural and healthy appearance. Lallemand mentions the case of a patient, who, though married upwards of five years, had never been able, in consequence of phymosis, to consummate the marriage act. In this case, various plans of treatment had been adopted and pursued, but without effect. The patient then consulted the professor, who treated the case as above, and the consequence was, a complete cure in a very few days.

But, perhaps, no cause is more fertile, more general, or more pernicious in its consequences, than that vicious practice, which one would rather leave to be imagined than actually mention. It is variously designated as onanism, masturbation, solitary vice, self-pollution, &c. Perhaps, too, few are aware of the extent to which this degrading practice prevails; and if the severity of these strictures should have the effect of, in any degree, suppressing so degrading a practice, I shall not consider my time misspent. This practice prevails amongst persons of all ages. I have seen patients who have admitted that, in youth,

when at school, they had indulged in it to an inordinate degree. Others admitted that they had commenced it in youth, and continued it even in their riper years ; while some have confessed that even at the most advanced period of their life—in fact, in ripe old age—they had been unable to abandon a vice, which had attained such an ascendancy that they could not leave it off.

I have, in a previous part of this essay, detailed some cases in which the parties, when taxed with this practice, obstinately denied it ; nor would they confess, till such strong facts were brought against them, that they could no longer resist the evidence. Many who indulge in this habit will frequently at first deny it ; but by a little perseverance and management we shall soon obtain the necessary information. And this is a matter of some moment ; because we cannot inculcate nor insist upon removing or suspending the operation of a cause, the existence of which has not been admitted. All our remedies will prove abortive, so long as the patient indulges in his malpractices ; and this he will assuredly do, unless he previously admit, and allow us to obviate, his delinquencies. Once admitted, when there is any change for the worse, we can impute his relapse to a recurrence to his former habits ; and the apprehension of this will act as a check upon, and probably preserve him from impurity.

Perhaps, of all the causes which can bring on this disease, there is none more prolific than those just alluded to ; and which, when practised to any extent, not only induce impotence, but also a train of nervous and other affections, which so far distress and embitter life, that the unhappy votary often seeks relief, from his sufferings, in suicide.

Self-destruction became so frequent, in Paris, among men of family, fortune, and rank, without any obvious cause, that an inquiry was instituted and the matter investigated. In most of these cases the procreative system was found in an atrophied or wasted state. The epididymis indurated, sometimes much thickened, or even knotted. On farther examination, the fluid taken from the testis itself, or from the vas deferens, was found very deficient, and upon microscopic examination wholly

destitute of spermatozoa. In some instances, when the attempt at self-destruction, by throwing themselves into the Seine, had been prevented, some of the parties thus rescued from a watery grave, admitted that they had indulged to such an extent in this solitary vice, that they had lost all desire for sexual gratification. The mental powers were quite enervated, and the bodily strength so reduced, that they no longer enjoyed any of the comforts or pleasures of life. Some declared that existence was become an intolerable burthen, and that self-destruction offered the only refuge, and held out the only prospect of escape, from those evils which their own imprudence had entailed. Indeed, a young gentleman, the pupil of one of the most eminent of our surgeons in this country, shot himself because he had lost all power for sexual connexion.

With the atrophied condition, the testicles, in such instances, are found almost bloodless, and very deficient in their usual degree of vascularity; the membranous envelopes pale and dry, frequently even somewhat tuberculated; in some were found deposits of lymph. The body of the testis itself presents various morbid conditions, of which no proper classification has yet been attempted. The whole subject appears to me one of great interest, and deserving more attention than it has hitherto received in this country.

There are other causes of impotency, some of a physical character, to which I do not mean here to refer; some, perhaps more imaginary than real, old age for instance. It might be questioned if impotency ever depends upon this cause. Instances are not wanting of men very far advanced in years who have married young women, and have had families. Therefore it may be presumed that old men are sterile from disease rather than decay.

Certain affections of the brain and nervous system, I mean original affections and functional derangements, are frequently associated with impotency; and they appear to act by withholding the necessary nervous influence. The causes to which I refer here as the most important, are excess in venereal indulgences, venereal affections including gonorrhœa, and masturbation.

DIAGNOSIS.

The means by which we are to discriminate one disease from another, and in the present case how we are to distinguish the affection we are considering from the numerous secondary ones, with which it so frequently becomes complicated, and which, also, it has mainly contributed to induce. Were we to depend upon the constitutional symptoms, we perhaps should never turn our attention to the true seat of the disease, because these constitutional symptoms prevail in many diseases besides the one under consideration. It is true that if we suspect the nature of the disorder, we may be inclined to examine the testicle, and this often presents such obvious characters as will prevent all possibility of mistake. Thus the withered condition, the indurated epididymis, and the care-worn and haggard appearance, are too striking to be wholly overlooked. But unless persons are acquainted with these characteristics, they may probably be referred to something else rather than the true source.

There is one thing that seems to be a very constant attendant, and that is a slight and almost imperceptible discharge from the urethra. This is very often considered as gleet, an error into which we may be easily betrayed, from a review of the patient's former habits; many having suffered repeated attacks of syphilis or of gonorrhœa, and now, as it were, undergoing all the consequences. Hence gleet naturally offers itself as the explanation of any discharge from the urethra under such circumstances. But not only are the characters of the two discharges different, (as may be seen, Plate III., p. 56,) the gleety being mostly greenish, and almost clearly purulent, while spermatorrhœa, or the anaphrodisiac weeping, is thin and watery, with but trifling viscosity; and farther, the latter is almost always greatly increased in quantity after voiding the urine or evacuating the bowels.

I have always found in bad cases that the patient suffers from a sort of incessant oozing from the urethra, and that on talking to a female, or when in the society of women, such persons experience a kind of pleasurable sensation, and a sort of involun-

tary emission succeeds. The following case, for the particulars of which I am indebted to my friend and colleague Dr. Venables, who kindly obliged me with specimens of the urine, will illustrate the matter.

CASE.—A gentleman, on the point of marriage, stated that he laboured under a weeping from the urethra; this was not very troublesome, but occasionally the discharge was more profuse. Sometimes the only evidence was a few stains, as if from the white of egg, observed upon the linen. But whenever in company with ladies, more especially if engaged in conversation with, or sitting next a lady, were it only at dinner, he experienced an uncontrollable erection, and this was attended with a sort of pleasurable sensation, speedily succeeded by an involuntary discharge.

The urine, in this case, was increased in quantity, about six or seven pints in the course of the day, specific gravity fluctuating between 1.025 and 1.028; of a deepish colour, and loaded with urea. He was now taxed with masturbation,* and in the confusion of the moment admitted the fact, although he afterwards denied it, alleging that he did not understand the meaning of the word *masturbation*. But on examining the urine and the discharge, in the manner to be hereafter described, zoosperms were after a little examination discovered; and he confessed the whole truth, and gave the following account of himself:—

When at a boarding school, in the early part of his youth, he was taught this vice by some of his fellow-students. After leaving the school he became religiously disposed and strictly avoided all sexual profanation, but still could not resist the impulse, which he felt, to indulge in the pernicious practice, the habit of which he had contracted while at school.

Persons, who have unfortunately contracted this habit suffer

* Dr. Venables has informed me that an excess of urea existing in the urine, is, under particular circumstances, an evidence of indulgence in a pernicious practice; and that he has often extorted the admission by abruptly making the charge, without allowing time for consideration. I can only say, my own observations have fully confirmed the correctness of these views, I believe first noticed by Prout.

not only in body but in mind, and they hesitate to consult regular practitioners, fearful of a discovery of their real condition. "The condition of these persons," says Curling, "is melancholy enough. Aware of the abhorrence with which their practices are regarded, they hesitate to consult the regular practitioner, and fly for relief to ignorant, but artful quacks, by whom their pecuniary resources are drained, for which they only meet in return with bitter disappointment. Such is the heavy penalty often paid by man for gross indulgence in sensuality—a degraded nature and a ruined constitution, embittering the best days of his existence, and sometimes leading to insanity or suicide."*

UREA.—In cases of this sort, as exemplified above, the urine, if examined, will be frequently found to abound in urea, which readily crystallizes on the addition of *nitric acid*, and the interval between the addition of the acid and the crystallization may be taken as a hasty, but tolerably good index of the excess. The mode of making the experiment is as follows, and which I extract from Dr. Venables' work:—†

"The normal proportion of this principle is about twenty parts ‡ in one thousand parts of urine; but this principle may be unnaturally increased or diminished. When in the normal proportion, no crystallization takes place on the addition of nitric acid, even after a considerable interval,|| but when urea is in

* On the Diseases of the Testis, pp. 410, 411.

† Guide to Urinary Analysis, &c., by Robert Venables, A.M. M.B. Oxon. p. 10.

‡ In a very able analytical review of the last edition of Dr. Prout's work in the *Medical Times*, the reviewer has shown that the proportions, thirty-and-a-half parts in the thousand, as stated in the former editions of this work, are incorrect, and were the result of Bezelius having analysed urine of a specific gravity much above the normal. The proper proportion, the urine being of normal density, is 20.07 parts of urea in 1000 parts of urine.—See *Medical Times*, 22nd July, 1848, p. 191.

|| In summer, as I have been informed by Dr. Venables, crystallization takes place soon enough to infer an excess of urea. This is owing to the rapid evaporation of the urine, and therefore, to guard against error, the urine should be kept in a cool place, or evaporation prevented or restricted, by placing it under a glass jar.

excess, crystallization takes place very speedily after the addition of nitric acid, and the interval between the addition and the crystallization may be taken as a tolerably fair index of the excess of urea. To examine for this principle, a small quantity of urine should be placed in one of the glass capsules, and, with the dropping tube, nearly an equal quantity of nitric acid should be allowed to trickle along the concave surface of the capsule, so as to pass under and float the urine upon its surface. If urea be present in excess, crystallization will take place, more or less speedily, in proportion to the excess. Urine abounding in urea has generally a high specific gravity, from 1.020 to 1.030, hence the specific gravity is frequently an indication of an excess of urea."

Urea, however, prevails in excess in many affections very different in their nature and character from the one under immediate consideration, and therefore urea can be made subservient only under special circumstances, or rather in connexion with other phenomena. It therefore becomes a problem of no small diagnostic interest, if there be any means by which the presence of this disease can be decided with some more absolute degree of certainty. It would appear that both the urine and the discharge itself from the urethra, have within themselves the means of enabling us to determine this point. The urine generally, but the discharge from the urethra of such persons almost always, if examined, will be found to contain *spermatozoa*, the seminal animalcules alluded to in a previous page of this essay. These animalcules will be found more or less abundant in these fluids, according to the circumstances, and when in the urine are perfectly diagnostic, inasmuch as they are never found in healthy urine.

For the purposes of diagnosis, therefore, in this disease, the MICROSCOPE is *absolutely indispensable*. The spermatozoa are so small, that their minuteness is beyond the power of conception, and their size can be determined only by mathematical estimation. For the examination, or more correctly speaking, for determining the presence of such minute beings, the most perfect and the most powerful instruments are essential. Hence, an *achromatic* instrument on the *best* construction, with a magni-

ifying power of *three hundred diameters*,* is essential for the discovery of these animalcules, supposing them actually existing in the urine. Nor is the microscope the only difficulty in this intricate and complicated diagnosis. It first requires considerable practice and manipulation to discover them even with a good instrument, and still much more to arrange the matter, so as to enable us to place them in the most favourable circumstances for being brought into view.

But, supposing that we have them already arranged, a little experience, and some familiarity with their form and appearance, are essential to recognizing them even when in the field of the instrument. Perhaps the description here subjoined may prove of some use to those who feel anxious to become acquainted with the diagnostic characters of the disease under consideration:—they consist of an elliptical head, or body, as some call it, formed by a dark outline, enclosing the transparent portion within. In some there is an opaque, or black spot, in the transparent part about its centre. From the head or body a long tail projects, sometimes perfectly straight, at others waved, depending on the position which the animalcules had taken at the moment of arrested vitality. When living, they are lively, and in active motion; and when seen under those circumstances they can never be mistaken.

According to Wagner and other physiologists, the spermatic fluid secreted by the testicles of all male animals, capable of impregnating the female, is of a whitish colour and a thick consistence. For microscopical examination it is best obtained, and in the greatest purity and most completely formed, from either the epididymis or the vas deferens. The sooner it is transferred to the field of the microscope the better. An animal recently killed should be selected, when the examination is intended to be of the most perfect kind,* or the human subject when recent, and before the seminal fluid can have undergone any material alteration, may be chosen.

A drop or so should be taken from the parts already men-

* The cost of a good achromatic microscope is about £50. and may be had of James Smith, Coleman Street, City; Ross, Powell, Pritchard, or any equally respectable optician,

tioned, and placed upon a slide of plate glass, three inches in length and one in width. The fluid should be spread out delicately by a feather, or what is preferable, a soft delicate camel hair pencil, in order to extend the surface and separate the spermatozoa; otherwise, they are so numerous and crowded, that anything like a distinct or perfect view will be impossible. Upon this, a slip of very thin glass about an inch in length, and half an inch in width, should be laid over the extended seminal fluid. Previously to putting on the small slip, if it is intended to preserve the object, the edges of the slip should be touched with a very minute portion of varnish, made by dissolving sealing-wax in spirits of wine. The coating should be as delicate as possible, so as to admit the closest possible approximation of the opposing surfaces of the two plates of glass. The small piece should be as thin as possible, not thicker than a wafer.* When properly placed and adjusted, the connexion may be secured by a thicker coating of the varnish, applied to the edges of the small slip from the outside. If a slide, prepared as above, the subject being very recent, be brought into view in the field of an *achromatic* microscope, and with a magnifying power of three or four hundred diameters, the following phenomena display themselves :—

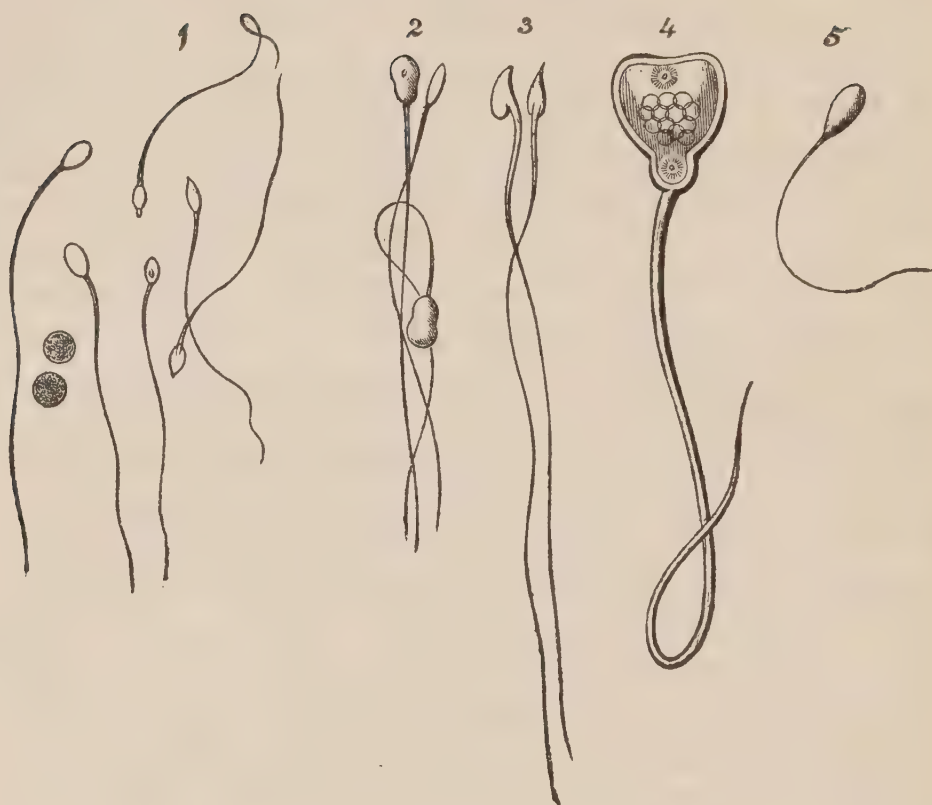
A multitude of very minute bodies of the form already described, closely connected together, and in more or less active motion,† is brought into view. On more attentive inspection, minute, round, granular bodies, less numerous than the spermatozoa, are readily observed. These are named by Wagner, *granula seminis*—the seminal granules. Both these elements of the semen are suspended in a clear, transparent, perfectly homogeneous fluid, named the *liquor seminis*.

In the diagram (see Plate I. p. 42,) the form and general appearance of the spermatozoa in man, and some other animals, are given.

* Slides, as they are called, may be had at most of the opticians.

† A slide, prepared as above, and brought into the field of the microscope, will show the spermatozoa in a perfect state at any period afterwards, however long; the only difference being that, vitality being extinct, their motions will be no longer apparent.

PLATE I.

*Explanation of the Plate.*

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| 1. The spermatozoa in the human subject. | 3. From the mouse. |
| 2. The form of these animalcules in the dog. | 4. The same from the bear. |
| 5. From the rabbit. | |

The round bodies in figure 1 are the "granular seminis," or seminal granules of Wagner.

When a drop of the thickish semen, taken from the vas deferens, properly spread out upon a slide, is transferred to the object plate of the microscope, and the semen employed possesses the full quantum of vitality, it often happens that nothing more than a general intestine sort of disturbance can be observed. It would seem as if the masses of spermatozoa were engaged in a universal struggle to disentangle and disengage themselves from each other in the viscid fluid. If a minute portion of the serum of the blood be now added to the drop of semen, the motions become much more lively and obvious. In some cases this happens suddenly, and in others more gradually. Indi-

vidual animalcules are seen to shake themselves, as it were, once or twice, then to turn on their axis, strike out with the tail, toss up the head once or twice, and then they dart in all directions across the field of the instrument. These movements at first, perhaps, confined to a single spermatozoon, gradually extend to others, till numbers in succession are involved. Here and there, for instance, a whole cluster seem to arouse themselves simultaneously from their torpor; while, in other instances, one or two contiguous ones of a mass seem to put themselves in motion, while the others will remain dormant throughout the whole time of the observation. But there is a great variety in all the phenomena, and such as baffles every attempt at description.

“It is stated that hours, and even days, after the sexual congress, the spermatozoa, still retaining their usual activity, have been found in the mucous of the vagina and of the uterus. They continue active in the urine, but for a much shorter period. Occasionally the motions suddenly cease, the animalcules dart about for a few times, and then become perfectly quiescent. Often they seem affected with spasmodic, or convulsive-like motions, more speedily induced by the admixture of a little pure water.”*

If an acidulous or alkaline fluid be suddenly added to a drop of seminal fluid, a rapid movement is immediately excited, and a disordered commotion pervades the whole mass. The spermatozoa shoot about in all directions; some are seen bending and twisting themselves violently; the tails frequently become entangled so as to form knots, and, according to M. Donné, they die.

In men who suffer nocturnal or other involuntary emissions, the spermatozoa may be found alive in the urine, even for hours, as they do not die so speedily in certain states of this fluid. Hence, a microscopical examination enables us to detect indulgence in vices which the delinquent would fain, often conceal.

The rodent animals are the best suited for studying the spermatozoa, because of the size and decided form of the spermatic

* Wagner.

animalcules in these tribes. Thus, the rat, the mouse, but more especially the squirrel, have the spermatozoa very large, and the margin of the head or body is turned up, like the brim of a hat. In the larger animals, as the horse, the ox, &c., the spermatic animalcules are smaller and less defined, so that they are not so well suited for examining the microscopical characters of the animalcules in the seminal fluid.

According to M. Donn , the spermatozoa very quickly die in the mucus of the vagina, and of the womb, if that of the former be too acid, or that of the latter too alkaline. This observation is of great importance, and should be carefully treasured up in the memory, as it may be rendered subservient in the event of our being called upon for opinions in cases of marriages which have proved unfruitful or barren.

Advantage has been taken of these facts for the purposes of criminal jurisprudence :—

“ A man, suffering from gonorrh ea, was tried for a criminal assault upon a child. The child’s shift and other articles were sent to Messrs. Goodsire, for their inspection and report. Some of the stains, of a yellow colour, were believed to be the effects of the gonorrh eal discharge ; others, characterized by a faint colour and peculiar odour, were regarded as stains caused by the seminal fluid. Some portion of the linen supposed to be stained by semen, when macerated in water, rendered it muddy, and the fluid emitted a strong characteristic odour. A portion of the linen was next examined in the field of the *microscope*, where the spermatic animalcules were detected, and easily recognized ; the majority of them were mutilated, the greater part of their tails broken off, the head not so plump as in the living state, but perfect specimens were found differing in no respect, or in the minutest detail from the living animalcules, except in the want of motion. The prisoner was convicted, and sentenced to transportation for fourteen years.” *

Willis observes that the spermatozoa live in the saliva, and in the urine, if not too concentrated, and more especially if the urine be kept somewhat warm. Hence, they are to be found in

* *Lancet*, 1844, p. 213.

this excretion after nocturnal or involuntary emissions, even after the lapse of several hours ; and hence, the urine, if examined by the microscope, will often enable us to determine the nature of his complaint, without even seeing the patient. Here I think we may introduce, with advantage, the analysis of the urine, with some account of its deposits.

URINARY ANALYSIS.

The specific gravity of the urine, when between 1.015 and 1.025, cannot be considered unhealthy, provided the characters of the secretion, in other respects, do not indicate disease. The temperature of healthy urine varies from 94° to 98° Fahrenheit, and the quantity secreted during the twenty-four hours may vary from a variety of circumstances. I have invariably found that if the specific gravity be 1.006, 1.010 or 1.012, the urine will be pale and watery ; and from three to four pints voided during the day. If the urinometer stand at from 1.015 to 1.020, the quantity secreted in twenty-four hours will vary from two to three pints : and if the specific gravity rise to 1.026, we shall not have much more than from one to two pints passed in the same period ; which will be highly coloured, depositing, in all probability, the lithates on cooling. I have invariably found the warm bath, under these circumstances, beneficial, by increasing the quantity of the watery portion of the urine, and thus rendering it less irritating.

Fresh urine does not contain any free acid ; the acid re-action upon litmus-paper, indicated by turning its blue to a red colour, depends upon the *super salts*. The urine when allowed to cool in a tall glass vessel, frequently deposits a white cloud ; which on being examined by the microscope, proves to be *epithelium*. This condition generally causes considerable alarm to nervous patients, more especially medical men, who have been, or are suffering from spermatorrhœa ; for they know that if the urine which contains seminal fluid be allowed to stand for a few hours, in consequence of the higher specific gravity of the latter, it will sink to the bottom. Such of the medical gentlemen as have had opportunities of seeing the seminal animalcules, thus obtained,

in my microscope, imagine that every cloud must contain them in abundance. Knowing the miseries entailed by such conditions they always feel apprehensive and unhappy, until these gloomy forebodings are proved vain by microscopical observations.

I may mention that the presence of a large quantity of epithelium in the urine, is a certain sign of irritation existing in the genito-urinary passages, which should lead us to seek out and remove the cause. A practical hint, of no little importance, in the treatment of spermatorrhœa, has been obtained from the examination of the urine of the lion, the tiger, the leopard, the hyena, and the panther, by M. Hieronimi. He has proved that the urine of those animals which feed solely upon animal food, contains a large quantity of both urea and uric acid, and is of high specific gravity. Therefore, when the urine is pale, wheyish-looking, voided in large quantities, and of low specific gravity, we should recommend animal food, prohibiting all kinds of pastry, slops, raw and green vegetables, fruits, &c. For the urine of the *herbivorous* mammalia, the horse, cow, sheep, &c., which live exclusively upon vegetable diet, is of low specific gravity. Urea and uric acid are found in very small quantity, but the urine abounds in *hippuric* acid. The urine of the *ovipari*, birds, reptiles and fishes, has been found to contain a large quantity of uric acid.

When it is our purpose to examine a specimen of urine, with a view to determine its morbid or healthy characters, we may begin with noting the following particulars: — The colour, whether transparent or turbid; the specific gravity, whether high or low; the reaction, whether acid or alkaline; whether the odour be fœtid; whether it smell of *sweet-briar*, first mentioned by Dr. VENABLES as peculiar to crystic oxide urine. Then we set it aside to see whether it deposits a sediment, or throws up a film. When it has stood sufficiently long to deposit all its sediments without undergoing decomposition, we proceed to examine the deposits.

If the deposit be of a reddish, or brick-dust colour, of a cream colour, or pinkish, which is extremely rare, staining the glass vessel, dissolved by heat, the urine itself having an acid

reaction, neutral or alkaline, presenting an amorphous appearance under the microscope, we know that the deposit consists principally of the alkaline lithates. We next proceed to inquire into the cause, which will generally be found to consist in a disordered state of the digestive functions. If irritation of the kidneys should ensue, we must treat it by leeches, warm bathing, tonics, a light nutritious and digestible diet. It cannot be too strongly impressed upon the mind of the practitioner, in every case, however simple, carefully to examine into the causes of disease at the commencement; for much time and character will be saved by early detection, which may be lost if these be not attended to. All must allow that many diseases which become incurable, might be averted, if these principles were adopted and acted upon. As illustrating the principles inculcated, I cannot do better than detail my own mode of proceeding.

I request the patient to pass the urine in my presence into a tall glass vessel constructed for the purpose, ground at the top, upon which can be placed a glass cover, to prevent evaporation. During the voiding, I observe the characters of the stream, whether full or diminished, spiral or uniform; full and continuous, or small, slow, or interrupted; whether the last drops be mixed with seminal fluid or not. I now place the glass with its contents covered with its plate upon an adjoining table, where, from time to time, I carefully note the changes which take place. Such as cloudiness or opacity; whether any deposit subside, and whether slowly or rapidly. The variations in the specific gravity. The effects upon litmus-paper, &c. &c., may be compared with the same properties on being first voided. Deposits, if any, should be collected and examined. A reference to Plate II. will show the microscopical appearances of most of these deposits.

If spermatorrhœa be present, the spermatic animalcules can be readily detected after the seminal fluid has subsided. For this purpose the urine must be poured off, and a small portion of the residue placed upon a glass slide, and when covered by a piece of thin glass, should then be brought into the field of the achromatic microscope as already explained.

PLATE II.

*Explanation of the Plate.**

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|---|---------------------------------|
| A. Prismatic or neutral triple phosphate. | G and H. Blood globules. |
| B. Stellar or bibasic triple phosphate. | I. Fibrinous casts of conduits. |
| C C C. Rhombs, &c., of uric acid. | J. Torula diabetica. |
| D. Cystine. | K. Spermatozoa. |
| E E. Cubes and octohedres of oxalate of lime. | L. Hippuric acid. |
| F. Mucous corpuscle. | |

URIC ACID.—If uric acid be the sediment, it will be found in the form of hard crystalline grains, not only occupying the bottom of the vessel, but when the urine has been poured off, adhering to its sides. Examined by the microscope these crystals most commonly assume the rhombic outline, as shown at C C C, Plate II. This acid sometimes assumes other forms, but the rhombic is the most common. Urate, or lithate of ammonia, is almost always amorphous, but its ready solubility on

* According to Aldridge.

heating the fluid, and its separation on cooling, are sufficiently distinctive.

EARTHY PHOSPHATES.—There are two varieties: the *triple*, or ammonio-magnesian phosphate, and the *mixed*, or the preceding mixed with phosphate of lime. The triple forms a most beautiful microscopic object; it appears in beautiful prisms, which are either square or triangular. One of the forms is represented at A, Plate II. B is the form assumed when the urine is precipitated by ammonia added in excess. It is not necessary to notice phosphate of lime, as it almost always appears as an amorphous sediment.

OXALATE OF LIME.—This remarkable sediment appears when certain affections of the digestive organs are present. The cystals are readily dissolved by nitric acid, their chemical properties, however, are of but little use, as they cannot readily be detected or seen without the aid of the microscope. If the urine be allowed to remain at rest for a time, and when the sediment has subsided, the supernatant portion be poured off, a drop taken from the residue and placed under the microscope, will exhibit the crystals of the oxalate. They appear mostly in the octohedral form, but they sometimes appear as dumb-bells. In some they appear like two superposed cubes. Some of these forms are shown at E E.

CYSTINE.—When cystine is present, the urine appears whitish, thick, and cloudy, and it is not rendered transparent by the application of heat. From its solubility in both acids and alkalies, Wollaston, its discoverer, named it cystic oxide. Precipitated or obtained by evaporation from its solution in ammonia, it appears, as hexahedral crystalline plates, the edges sometimes serrated. The outline may be seen by reference to the letter D in the plate.

MUCUS AND PUS.—These principles are frequently found in the urine; they appear as globules. The microscope therefore affords the most ready means of detecting them. The mucous globule is shown at F in the plate.

BILE—is best detected by M. Donné's test. This consists in dropping a drop of the urine upon a white plate, and near it another of nitric acid; when the urine and acid mix, the mixture will assume a green colour, readily perceived by the microscope.

SUGAR.—When this is present the specific gravity of the urine will be found very high, notwithstanding the quantity may be very large. Moore's test is the best; he recommends boiling a portion of the urine with nearly an equal quantity of solution of potass; if sugar be present the liquid will assume a deep porter or beer colour. By chemical means the sugar may be extracted and crystallized, like ordinary sugar. Diabetic urine undergoes putrefactive fermentation, generating a sort of confervoid vegetation named *torula diabetica*, shown at J, Plate II.

ALBUMEN.—This may be present with or without blood globules; if the latter be present they are best seen through the microscope. When the urine is albuminous, as in Bright's disease of the kidney, blood globules are not necessarily present. The albumen is readily detected by dropping a few drops of nitric acid into some of the urine contained in a tube, and heating it over a lamp. If albumen be present, the urine soon becomes cloudy and opaque, and at last a white coagulum falls down to the bottom, leaving the urine above quite clear.

Some urine having been sent to me by a gentleman living a considerable distance from town, I discovered numerous spermatozoa, upon which I wrote, requesting to be informed whether he was subject to a constant discharge from the urethra, and if so, to send up a small quantity squeezed out from the urethra, carefully packed between two glass slides.* In reply, the patient informed me that he had been long subject to gleet from re-

* For the purposes of diagnostic investigation, two slips of common white window glass, from one to two inches long, and half or three-quarters of an inch broad, which may be procured from any glazier, will answer every purpose. The discharge having been received upon one slip, the other is to be placed over it, and the whole secured with two or three winds of

peated gonorrhœa, at the same time sending up some of the discharge. Upon microscopical examination, I found that it abounded in spermatozoa. I informed him, by letter, that I did not consider his case one of gleet, and hinted my suspicions as to the nature of his complaint, and that he was troubled with nocturnal emissions. I heard no more for three weeks, and supposed I had offended the gentleman, when he called one morning, at which interview he admitted that he suffered much from involuntary seminal emissions, and also that he indulged to a great extent in masturbation.

Willis states, that the spermatozoa still show feeble motions, and hence may be detected alive in the urine of persons who have indulged in this vice; but that he never found them in the urine of perfectly healthy men. They are found in the urine of men labouring under anomalous symptoms of a nervous character, connected with disorder of the vesiculæ seminales, and the prostatic portion of the urethra.

ANALYSIS OF THE SEMINAL FLUID.—Wagner states, that the spermatic fluid, in its normal state, is a thick, viscid, whitish grey, or a slightly yellowish coloured fluid, heavier than water, in which it sinks, but forming an emulsion when shaken up with it. It is said to have a peculiar odour compared to that of “grated bones,” or the flower of the Spanish chesnut; but this, probably, belongs to the fluids, with which it becomes commingled,—the prostatic secretion, &c.,—as it passes along the urethra. Pure semen taken from the epididymis or vas deferens, has no such odour. Dried and burned, it gives off first an animal, and then an ammoniacal odour; the ammonia is a product resulting from the decomposition of the animal matter. Semen has an alkaline reaction, but this is owing to the free soda which it contains. It consists chiefly of albumen, earthy salts, and a peculiar animal principle named *spermatine*.*

strong thread. So packed, the slips may be sent by post, and I have received them, thus secured, from very long distances in the country, and never heard of any accident or failure.

* Wagner, pp. 35, 36.

According to Vanquelin's analysis, its chemical composition is as follows :—

Water	90
Animal mucus (spermatine)	6
Free soda	1
Phosphate of lime	3
Chloride of calcium, a trace	
	<hr/>
	100

Crystals are never found in recent semen; but when it has stood for a considerable time, beautiful spicular crystals are observed, but of no definite form. In a specimen which I recently had, my friend Dr. Venables compared the form of crystallization to the appearance in the cerebellum, named "*arbor vitæ*," and of which, certainly, it was a very exact representation. Upon the whole, however, zoosperms, or spermatozoa, are the essential characteristics of this fluid. To sum up, then, the diagnostic characteristics of this disease :—

These are, after the continued application of some of the causes enumerated, *spermatorrhœa*, and a constant discharge from the urethra of a thin fluid, somewhat like white of egg, much increased on passing the urine, or a stool;* nocturnal or involuntary emissions of semen; withering of the testicle, and what I have observed, but what I cannot find noticed by any author, an induration, or knotted enlargement of the epididymis. If with these we combine the microscopical examination of the discharge from the urethra, and of the urine, in which will be found spermatozoa, the matter will be put beyond the possibility of a doubt; nor shall we require any additional evidence. The constitutional symptoms are merely corroborative; but of themselves, independent of other diagnostic characters, really of no value. Their severity merely indicates the extent to which indulgence may have been carried, and the inroads which it has made upon the constitution.

* Lallemand particularly notices the emissions of spermatic fluid on passing the urine or fæces, many instances of which are cited in the numerous cases he has related.

PATHOLOGY.

By the term pathology, we are to understand not only the operation of the causes, or rather the manner in which they bring on the primary or principal disease, but also those morbid operations in the economy which superinduce the other affections with which the original becomes complicated. We have already enumerated the principal causes ; among these we found venereal excesses a very active and powerful means of inducing spermatorrhœa. This evidently must act by weakening the parts, previously over-excited by abuse. But to comprehend the subject perfectly, it will be necessary first to take a slight glance at the anatomical structure and physiological action of the urethra, and parts concerned.

The urethra is a canal extending from the neck of the bladder to the orifice at the extremity of the glans. This canal is lined by a mucous membrane, and is divided into three distinct portions ;—the bulbous extending from the extremity of the glans, Plate III., page 56,* H H, to the bulb, a little beyond J J. A B C is the canal laid open, and I I are the corpora cavernosa. The membranous portion commences immediately behind the bulbous portion, and ends at the prostatic portion, B. The prostatic portion, is so named, because it lies embedded in the prostate gland. It is in this part that the seminal ducts open as delineated on either side of F. The dotted lines proceeding from the ducts to the adjoining figure A, delineating the *spermatozoons* and *granula seminis*, show that these are the openings through which, when weakened, or otherwise morbidly affected, the seminal fluid escapes into the urethral canal, giving rise to that constant oozing or weeping, mentioned in a former part of this essay. A C and D, respectively show the microscopical appearances of the seminal fluid ; the gonorrhœal discharge, and the matter of chancre. The conducting lines point out the place of secretion, and in D the seat chancre. The posterior and more expanded part of the figure is the urinary bladder laid open, so as to expose its interior, and show the continuous connexion between its cavity and the urethral canal.

* See the diagram, with explanation, at p. 56, &c.

From this it must be evident that in the relaxed and over-patulous state of the ducts, the semen escaping into the canal, the urine will become impregnated with this fluid, and on standing, the spermatic animalcules will be found in the sediment which has subsided to the bottom.

It has been before noted, that it is in the last drops of urine that the evidences of the presence of the seminal fluid are most likely to be present. This is easily accounted for, when we consider that the urine flows in a free and uninterrupted stream, till the bladder is almost completely emptied. But when it comes to the last drops, then the abdominal muscles act powerfully, compress the viscera, and force them down into the pelvis, so as to press upon the bladder. The muscles embracing the urethra also act spasmodically, and thus the ducts are compressed by these two forces, and any fluid they may contain driven out into the canal, and mixed with the last drops of the urine, providing the ducts are filled and patulous.

A similar reasoning will explain how the expulsion of the fæces is attended with a flow of the seminal fluid in individuals suffering from the complaint under consideration. If the bowels be constipated, and the stools hard, the effect will be much increased. During defecation the abdominal muscles contract powerfully, compress the viscera, forcing them to descend into the pelvis. In Plate IV., K K is the sacrum, I I I the rectum, which is the terminal portion of the intestinal canal, T is the anus, and the urinary bladder is shown by L. The relations of the bladder and rectum are here also shown. The bladder and even the prostatic portion of the urethra are in contact with the rectum. In the passage of the fæces, but more particularly when these are hard or bulky, the prostatic portion of the urethra will be compressed, the ducts emptied of their contents, and the seminal fluid will escape into the urethral canal. Indeed, many patients experience a sensation of great faintness, and a sort of feeling as if something fluid were passing from the ducts into the prostatic portion of the canal when at stool.

The testicles are the secreting organs which prepare the spermatic fluid. From the connexions between the mucous lining

of the urethra, with the spermatic apparatus, irritation and inflammatory affections of the former will often spread to or superinduce a corresponding disorder of the latter. Hence, gonorrhœa and other forms of urethral inflammation irritate the spermatic canals, and cause an increased secretion of semen.

The mucous membrane lining the urethra, will often be found, in persons who have suffered for any considerable length of time, from either gonorrhœa or spermatorrhœa, thickened and insensible, corrugated and shrivelled up; in some degree resembling the appearance which the hands of washerwomen present after a hard day's work. In such cases the first object should be to re-establish the healthy condition of the mucous membrane.

With these conditions we generally find the testicles pendulous, and the veins from debility in a varicous state; and when handled, this state gives the sensation as of a number of worms in the scrotum; or perhaps the notion may be better conveyed by likening it to the feel of a fowl's crop just after a good feed. I have frequently found the above to be the state in cases of inveterate masturbation, often increased to such an extent as to present a most unsightly appearance, and requiring the adoption of special means to hide the deformity.

To this head we may also refer the different abuses of the organs themselves. They all act by producing unnatural excitement, to which succeeds over-action, to be followed by debility. This lays the foundation of chronic disorder, which from neglect acquires a degree of obstinacy difficult to overcome. It is in these circumstances that patients deceiving themselves are doomed to disappointment and mortification. They vainly imagine that disease, which has been taking root for years, may be easily eradicated in as many weeks, or even days.

PLATE III.

*Explanation of the Plate.*

A. Spermatozoa and seminal granules, supposed to be seen illuminated on a glass slide through the microscope. The dotted lines on each side of F point to the seminal ducts from whence they escape.

B. The prostate gland divided in laying open the urethral canal. In the substance of the gland may be seen small dark points. These are the prostatic ducts.

TREATMENT.

The treatment of spermatorrhœa may be arranged under two general heads : the *curative* and the *preventive*. The curative, of course, consists in the application of those means which give tone and vigour to the system ; and at the same time so act on the immediate organs, as to remove their debility and deranged condition. The preventive consists in the proper application of means which possess in themselves no direct influence over the morbid phenomena, but act as restraints upon the patient, preventing indulgence in those pernicious habits, which have reduced him to his melancholy condition.

It unfortunately happens that patients, though they feel ill, seldom so far understand their disorder, as to induce them to seek for medical assistance, till by lengthened perseverance, they have not only greatly impaired their constitution, but have also severely injured the genital organs themselves. It often happens also, as already shown, that the symptoms so closely resemble those of disease of an entirely different nature, that the attention of the practitioner is not directed to the real disease ; and mere symptoms engross all the attention, while the organs ac-

C. The urethra laid open throughout its whole extent into the bladder E, also laid open in the same section. The several contractions and dilatations of the urethra are here exposed.

E. The bladder laid open, exposing its cavity in a similar manner.

F. The verumontanum or caput galinaginis, with the seminal ducts on either side.

G. Appearance of gonorrhœal discharge under the microscope, with dotted lines, showing the lacunæ, or arrow-like openings, from which the gonorrhœal discharge flows. The gonorrhœal space may be considered as comprehending about two inches of the anterior part of the urethra.

D. The matter of the venereal chancre, as seen under the microscope. The dotted lines leading from the venereal ulcer, situated upon H, the glans penis.

A, C, and D, point out the microscopical distinctions between spermatorrhœal, and gonorrhœal and syphilitic discharges.

H. H. The glans penis.

I. I. The corpus spongiosum urethræ,

J. J. The corpora cavernosa penis.

tually suffering wholly escape. Hence, the disease proceeds and if its character be at last suspected, it is only at a period when the constitution has been so invaded, that its condition imperatively demands our immediate attention.

It is very difficult to detect early the beginnings of the disease. Lallemand details two cases, the subjects of which purposely studied medicine, the one during ten, the other fifteen years without interruption, and with the view of learning the nature of their malady; but at the expiration of that time they did not even suspect the cause of their suffering. We may judge from this of the numbers suffering from diurnal pollution, which escapes detection. Lallemand mentions several very remarkable instances; the two following highly interesting examples I shall transcribe from his work:—

CASE—*Of a military officer, who abandoned the profession of arms, to seek in the study of medicine the nature of the disease with which he was afflicted. Successful issue related by the patient himself. Copied from Lallemand's valuable work:—entitled “Des Pertes Seminales Involontaire, par M. Lallemand, Professeur de la Faculté de Médecine de Montpellier. Paris, 1836.”*

“I was born very weak, with inguinal hernia: I have been subject from infancy to a purulent discharge from the ears, very copious and tenacious, from the left ear especially. Strengthened my constitution by habitual exercise in the country, substantial diet, and river bathing, and at thirteen I was as robust as any of my companions.

“At this period a lascivious, but circumspect young girl excited premature erections up to the moment in which emission excited her apprehensions, This precocious excitement stimulated me to masturbation. At sixteen years of age I contracted a blenorragia (gonorrhœa,) which I carefully concealed, and which disappeared slowly under the use of cold drinks, baths. and strict attention to diet, and avoiding stimulants. The discharge returned twice the same year after excess in new beer, since then it has frequently re-appeared after long walking, riding, or exposure to cold. At eighteen I obtained a rendezvous with a woman whom I liked very much; but I experienced so

much agitation that I could not profit by it. I attributed this to the excess of my passion; the failure produced deep grief and great distrust of myself. The following year, I was more fortunate with another female, but I paid dearly for the excess I committed that night: the next day the discharge re-appeared more profusely, and there came on severe inflammation with swelling of the testicles; the right epididymis remained engorged for five or six months.

“From that time my health gradually failed; I suffered from jaundice, febrile accessions, wandering pains all over the body, and disorder of the stomach; I became extremely sensible to cold, to heat, moisture, and to every sudden atmospheric change. The alteration in my health induced me to give up the military profession, and apply myself to medicine to find out the cause of my suffering.

“When arrived in Paris I found the humid moisture of the streets and of the dissecting rooms readily brought on my gleet; and sitting for a long time produced a sense of weight and heat in the perineum, with lancinating pains.

“These increased to such an extent as to induce me to believe that I had a stone in the bladder; I felt constant pain in the fossa navicularis; I passed water very frequently and with pain; the last drops of urine were thready, glairy, producing in the neck of the bladder the feeling of a red-hot iron. I had determined upon an operation; but Professor Boyer before sounding, prescribed baths, which assuaged the irritation. The vacation arrived, and exercise in the open air removed all these symptoms.

“The following year I worked night and day, preparing for a concours; my digestion became deranged; diarrhœa, with straining at stool came on. On going to stool I often passed sperm in abundance. I wished to continue to give this the attention it deserved: so much occupied I felt stupid; tinkling in the ears came on; I understood nothing: I was obliged to renounce every occupation. I apprehended that every moment I should be seized with a *fit of apoplexy*.

“The third year I suffered from palpitations which made me fear aneurism of the heart; at a later period I felt pains in the chest, constant cough, and I persuaded myself that I was con-

sumptive. At last after my reception I set out for home, emaciated, jaundiced, and very melancholy. The motion of the carriage brought back my gleet.

“A little time after my arrival I contracted a venereal disorder, which I treated with mercury. This ruined my health, and I discontinued it so soon as the external symptoms had disappeared. I then got a *chronic gastritis* attended with obstinate constipation and deep hypochondriasis.

“I was tormented with flatulency. The stomach and abdomen were distended beyond measure with wind. I felt as if a hand of iron produced a kind of internal grasping which closed up every passage. The descent of the diaphragm was prevented by the violent pain, and distension of the belly. I felt as if I should choke; my face became purple, copious sweat came all over the body, at last that kind of constriction ceased, and I was relieved; but for several days I felt fatigue, and my skin assumed a jaundiced tint.

“During two years I combatted this *chronic gastritis* by leeches, baths, lavemens, and the strictest vegetable diet. I lived also for eight months upon milk; but all without any success. I felt a constant desire to eat, and as soon as I took a little substantial food I was overwhelmed by the labour of digestion.

“At length I observed that I passed sperm during the violent efforts excited by constipation, and I was soon satisfied I likewise lost it in making water.

“It was then only that I comprehended the cause of all my suffering. I obtained Sainte Marie’s translation of Wickmann, I devoured it with eagerness, I learnt it by heart, I thought myself saved; but was doomed to disappointment.

“River baths, cold lotions to the perineum, produced an unfortunate impression upon the bladder and the vesiculæ seminales. When I entered into the water I felt a spasmodic contraction of these reservoirs, and the urine that I was obliged to pass contained an abundant flocculent cloud, owing to the presence of a large quantity of semen. The cold lotions produced only a momentary effect.

“The cold clysters excited in the rectum an intolerable te-

nesmus, attended with pain and weight; they facilitated the expulsion of fæcal matters, by provoking contractions of the rectum; but these spasmodic contractions were soon followed by those of the vesiculæ seminales, and a copious discharge of semen. I cannot adequately express how much injury I sustained from these cold lavemens.

“Ice, which I took internally, gave me tone for some time; it stopped the constipation, and excited energetic erections; but it soon brought on inflammation of the bladder and prostate, which disclosed itself by a painful sensation of weight at the side of the rectum, and lancinating pains behind the pubes; a frequent and irresistible desire to pass water, and a copious, abundant, glairy, puriform deposit which adhered strongly to the bottom of the vessel. The application of ice to the perineum and loins had the same effect.

“Quina, spa-water, and tonics produced good effects for a day or two, but they soon increased the irritation of the bladder and canal, they brought back the constipation.

“Attributing to the pressure of the fæcal matters the seminal discharges which took place on going to stool, I resolved to apply the practice of Professor Boyer for fissures of the anus. I myself, cut before a glass, the spincters with a lithotome, which I had constructed expressly for the purpose, the expulsion of the fæces became more easy; but the seminal losses were not diminished.

“I applied cauteries to the loins and perineum to relieve the fixed pain at the neck of the bladder. I tried urtication, and even a capuncture to stop the spasmodic contractions of the vesiculæ seminales, which I felt very distinctly, especially when I sat down; they caused despondency because they warned me of an inevitable pollution. These different means succeeded for some time, but their effects were never lasting. I often took lavements with decoction of poppy heads to ease the irritation of the genital organs, and procure me a little repose.

“Nothing can explain the anxiety and despair these long nights without sleep caused me. The most frightful dreams, the most dismal ideas continually led me to think of suicide. It was always with terror that I saw the moment of going to

bed arrive, and I waited the arrival of day as a blessing. It was particularly against this punishment that I employed narcotic lavements, but they increased the sluggishness of the rectum and the relaxation of the genital organs. Besides they excited violent pains in the head and disturbed the digestions functions. They increased the habitual somnolency which tormented me during the day, and which rendered me incapable of any serious occupation. It was in this state of complete non-entity, under all these circumstances, that I arrived at Montpellier, completely disgusted with life.

“The cauterization that you practised upon the prostatic portion of the urethra, has been rapid, and has not caused me so much pain as I expected; during twenty-four hours only the emission of urine was painful, and accompanied with some drops of blood. For the rest, this pain, although much more sensible than that which I experienced before, appeared to me a great deal less disagreeable; it was accompanied with a feeling of strength which gave me courage.

“From this moment a complete change was effected through my whole body. From this period a new existence commenced for me; it appeared to me that a thick cloud ceased to envelope my brain.

“At the end of eight days the urine was limpid, and emitted with force; the stools were voided with ease, and no longer accompanied with seminal discharges in the urethra, bladder, and rectum. A vigour, which inspired me with confidence. Sleep returned. I could soon eat of anything, and my appetite was voracious. The erections had an energy which I had never observed before.

“In the spring of 1825, I experienced a return of the vesical and prostatic irritation, I attributed it to the influence of the season. Your second cauterization was as effectual as the first.

“In 1826, I experienced, always in the spring, a return of the former symptoms, but in a modified degree. The cautery was as effectual as previously.

“My health from this time became perfectly re-established, and is now more firm than it ever has been. I can endure under these circumstances what I could not have borne at twenty years

of age, the erections are more vigorous, and the ejaculation not so precipitate; it is accompanied by sensations, the vivacity of which were unknown to me. My intellectual functions have acquired a new vigour; if they had been in as good a state when I found myself in such a melancholy condition, my career probably would not have been so unfortunate. At all events, I am thankful that I am delivered from the frightful malady, which for twenty-one years poisoned and embittered my existence."

Lallemand also relates the following remarkable case, which I cannot refrain from inserting:—

CASE.—"M. K., a Pole, the lymphatic temperament very well characterised, born with inguinal hernia of the left side, which was cured by the application of bandages. A wasting of the corresponding testicle was the consequence that followed. At seventeen he addicted himself to masturbation almost every day; and sometimes twice or thrice. At twenty he suffered from weakness of the limbs, accompanied with trembling, pains in the knees, loins, &c.

"One day being rather late in setting out for his college, and fearing a severe reprimand, he began to run, but he was soon obliged to stop, experiencing all the sensations which ejaculations produce. It took place, in fact, although the penis was not in a state of erection; he felt at this moment a kind of fainting, which forced him to support himself against a wall till the seminal emission was completed, which was very copious. The same took place twice afterwards, and was always induced by fear. The patient thinks, that from this period he had daily pollutions, although he did not perceive them until he had been examined upon the subject. And I believe he is not deceived, for although he had abandoned his habits, he experienced from that time pains and oppression of the chest, which gave him the appearance of a person being in a consumption. His health declined more and more, and to investigate the cause he commenced the study of medicine.

"The following year the Polish revolution broke out, he joined the army, and during the campaign he had frightful nocturnal pollutions. The stream of urine weak, the last drops were thick, and remained a long time in the urethra. He lost

all venereal desire, and was left completely impotent. He arrived in France at twenty-three years of age; digestion deranged, which he attributed to the use of wine; his disease was considered to be chronic inflammation of the stomach. It was treated by leeches, cataplasms, &c., the following year his gait became tottering, in consequence of the extreme weakness of the lower extremities, especially in the left side. Blisters to the limb and to the left hip, frictions, &c., were ordered, but increased all the symptoms. In December, 1836, I saw him at the age of twenty-seven; cessation of nocturnal pollutions for two years, excessive emaciation, general prostration, loss of appetite, digestion slow and laborious, and attended with flatulency, purple appearance of the face, stupidity, faintings, disorder and confusion of the head, loss of memory; obstinate constipation lasting for five or six days. *Seminal discharges during the efforts at stool*, sleep very short, fatiguing rather than refreshing, ringing in the ears, wandering pains causing watchfulness, and compelling the patient to walk about the greater part of the night. Burning pain in the head, with coldness in the lower limbs; considerable diminution in the intellectual functions; loss of memory, extreme peevishness; he could not remember old associations, even old friends, companions of his exile; desire for solitude; excessive timidity, and yet a desire for a duel in the hope of being killed. Flaccidity of the genitals; complete absence of the venereal appetite, and of erections; excessive sensibility of the urethra on the contact of the sound; *urine disturbed, flocculent, containing a deposit similar to that of a strong decoction of barley*. The patient's own statement:—‘Urine copious, I am compelled to pass it very often, the last drops *thready* and *viscous*. The jet is not continuous, *is stopped from time to time by spasmodic contractions of the urethra*, so that I am obliged to stop myself each time, before beginning again to pass urine. *The orifice is always moist and red*. I experienced the last fortnight a sensation as if I was passing seminal fluid, I find, from time to time, *slight spasmodic movements* which must result from *contractions of the vesiculæ seminales*, for on examining the penis a few moments after, I always found

the urethra filled with a copious *viscous* moisture. This sensation is felt especially when I am seated.

“‘Latterly, on passing my fifth examination, I finished my paper, when I heard the hour strike, which announced to me that I must send in my copy. The mere thought that I was behind-hand, produced immediately a very copious pollution, accompanied with a voluptuous feeling, but no erection.

“‘After some days of examination, on the 10th of December, 1836, I cauterized from the neck of the bladder to the bulb of the urethra.’ The following is the patient’s account of the consequences of the cauterization:—

“‘To begin, from the 20th of December up to this day, the 6th of January, I perceived in the whole of my economy, an improvement daily, and in a marked degree. The urine always limpid. The first benefit of the cauterization was the cessation of the frequent desire to pass urine; afterwards the digestion improved. At present I can eat of everything indiscriminately, and I feel no longer weight or pain in the stomach. The epigastrium is no longer painful on pressure. I feel no longer in the belly that *fermentation* that attended digestion, and tormented me, especially at night. In fine, the symptoms of *chronic gastritis* have entirely disappeared, constipation has in like manner ceased. The erections are restored, they are complete and lasting. I have had three nocturnal pollutions since the cauterization; the first the tenth day, the latter yesterday, the twenty-fifth day; all energetic with a lively feeling of pleasure, and I am much astonished to find that they have in no respect weakened me.’”

M. Lallemand states that he has frequently seen M. K. since he sent him this account; his voice has recovered all its clearness, his muscular strength has been restored; and with his friends he laughs at his previous misanthropy.

One of our first endeavours therefore should be to inquire into the origin, and ascertain the cause of the disease. Unless this be done all our efforts will prove futile, whereas the discovery and due consideration of the nature and cause will lead to a successful issue as clearly shown in the history of the following case.

CASE.—A gentleman consulted me about twelve months ago under the following circumstances :—Both his parents were perfectly healthy ; but there was an hereditary disposition in his family to insanity. About twenty years since he contracted a syphilitic affection, for which he consulted one of those persons who advertise the “ speedy and radical cure of this disorder.” He was subjected to some mode of treatment which salivated him most severely, and completely incapacitated him from attending to his business. He was forced to go into the country to recruit, where his health ultimately became re-established ; but to his great astonishment and dismay, he discovered that he was completely impotent.

Under these circumstances he returned to London, and engaged as a traveller to a large wholesale mercantile establishment. He continued in this situation for many years, indulging in the pleasures of the table, and drinking freely of wine. He frequently attempted to indulge in sexual intercourse, but could never accomplish his object. No matter, whether excited by wine, or free from the agency of every stimulant, he alike failed. In this condition, he consulted some of the most eminent men in London, and was treated according to their several views, and he underwent the routine of treatment for stricture, disease of the prostate, and urethral irritation, but without the slightest benefit. He next consulted a surgeon of some notoriety in the city, who, profiting by the previous failures, and their history, took up the digestive organs, as the grand agents, the “ prime movers” in all the mischief. He advised purgatives to clear out the bowels, and afterwards, as tonics, steel, and cold bathing, in which the patient persevered for some months, but still without any sensible amelioration. As a last resource, marriage was recommended, but, for obvious reasons, he declined to follow this advice. Under these afflicting circumstances, he suffered much from mental depression and prostration of bodily strength. He became timid, bashful, and retiring, and felt greatly alarmed lest he should at last be tempted to give way to a desire which he felt—to commit suicide. It was at this period that he first consulted me.

The stomach and bowels were very much out of order ; the

liver torpid ; diurnal pollutions frequent in the course of the day. When travelling in a carriage upon rugged roads, or on going to stool, he passed large quantities of seminal fluid, which likewise came away abundantly with the last drops of the urine. The urine itself was limpid and copious, and frequently abounded in spermatozoons broken up and mutilated. The testes were flabby and pendulous. I directed alteratives and tonics to improve the health and get up the strength. I cauterized the urethra, which greatly abated the pollutions. He now left London, but the nocturnal emissions returning, he came back to town, when I again applied the cautery, and the discharges ceased. But they returned again, as he was obliged to take stimulants rather too freely, and to travel, before permanent contraction of the ducts could be insured. I therefore determined not to apply the cautery again until circumstances would permit of his stay in London for two or three weeks, and avoiding stimulants. Christmas presenting the most favourable and convenient period, the cautery was now applied. The nocturnal and diurnal pollutions were now completely stopped, and his general health was greatly improved, but the sexual debility still continued unabated. This I attributed to the long disuse, and consequent torpor. I therefore decided on arousing them from their state of lethargy. With this intent I galvanised the spine, directing the current along the lumbar vertebræ to the testes. After continuing the galvanism for three weeks, this patient went into the country, where he remained for some time. On his return, he called upon me : he was in excellent spirits, and assured me that his general health was as good as ever, and that his sexual powers were completely restored.

We must recollect that the bowels, and indeed the mucous surfaces generally, are in a highly irritable condition, and will not endure with impunity drastic agents. The milder aperients should be resorted to, and we must depend rather upon a persevering importunity than upon their violence or activity. An enumeration of these would be quite out of place here, and therefore the selection and application must be left to the discretion of the practitioner.

Purgatives which irritate the lower bowels should be given

with great discrimination in the treatment of spermatorrhœa, for they frequently extend their irritating influence from the rectum to the bladder, prostate and vesiculæ seminales, and in this way produce considerable mischief. The connexion between the rectum and the genito-urinary system can be readily understood by a reference to Plate IV. When we reflect that the same arterial tubes and the same nerves supply the reservoirs of the sperm, urine, and the fæces, we can readily comprehend how they are influenced by each other.

Having secured the due action of the bowels, we next turn our attention to the constitution, with a view to obviate the consequences of debility. In the section on the causes, it was observed that repeated attacks of syphilis, gonorrhœa, and indeed we may add urethral irritations of every description, and all things, of course, which may be regarded as involving great excess or irregularity in sexual indulgence, frequently induce disease of the description under consideration.

The following case, which occurred to me since a previous edition of this treatise, affords an interesting illustration :—

CASE.—A medical gentleman applied to me in the August of 1846, and gave me the following summary of his case:—"While attending my first course of lectures," he stated, "I unfortunately contracted gonorrhœa, which was treated in the usual way. In about three weeks all the acute symptoms had entirely yielded; and having received an invitation to a party, I accepted it, when I indulged rather too freely in stimulants, which brought back all the inflammatory symptoms with greater, even than their original vehemence. The inflammation extended itself along the urethra, and reached the bladder in spite of all that I could do; and this caused retention of urine. The inflammatory action and retention were ultimately relieved by hot baths, leeches, and sedatives; still the bladder remained extremely irritable, and would not retain more than an ounce or two of urine. When this quantity accumulated, I was suddenly called upon to evacuate it, and the act was followed by a great deal of spasmodic contraction about the neck of the bladder. Quiet, and the sesquichloride of iron mitigated the pain, and

improved my general health. I was now recommended cold bathing, which aggravated the symptoms, and brought back the former violence of the disease.

“At this time I became pupil to a house surgeon, who undertook the management of the case. Under his direction I took tonics, both the vegetable and the mineral. Leeches were applied to the perineum, and these followed by counter-irritation. The blisters, however, only aggravated my sufferings. An ointment composed of iodine relieved for the time, still I always suffered from an uneasy feeling of the prostatic portion of the urethra, so much that I myself could not but imagine that the prostate itself was diseased. The urethra was examined, and the result was a belief that there was a stricture in the anterior portion. The introduction of the bougie (sound?) caused, for the time, a good deal of spasm, but was subsequently followed by some relief, but of short continuance.

“My general health, which, previous to the attack of gonorrhœa, was very good, now began to give way. The pain in the prostate became so severe as to prevent me from walking. I became extremely irritable; suffered from loss of appetite, sleepless nights, and frequent *nocturnal pollutions*. I felt a desire of being constantly alone; indigestion in an aggravated form, attended with flatulency, came on, and this rendered my state truly miserable. My debility was at the extreme, and I felt incapable of any exertion, either bodily or mental. The only thing which in the slightest degree relieved me, was, lying on a table, and applying cold water to the perineum.

“Opium now became my sheet-anchor, and I was obliged to have constant recourse to its use to relieve my sufferings. In this miserable state, I accidentally saw the advertisement and favourable notice of your work on Spermatorrhœa in the *Lancet*. Its perusal immediately opened my eyes, and threw a sudden and unexpected light upon the nature and causes of my own unhappy condition. I now felt convinced that I was, and had been for years, suffering from nocturnal and diurnal pollutions. Your observations led me to examine the last drops of the urine, and the result was my conviction that it contained the spermatic fluid. Upon reflection, too, I felt satisfied that the seminal fluid

passed away copiously while at stool. I have lost all desire for sexual intercourse; the testes hang pendulous and flabby; and I am the victim of incessant excoriations."

I practised three or four cauterizations upon the prostatic portion of the urethra, which completely arrested the nocturnal and diurnal pollutions. The preparations of iron and steel, with cold baths, completed the cure begun by cauterization.

OPIMUM—injurious effects of in nocturnal emissions.

I have been informed by several patients, who have consulted me in consequence of suffering from spermatorrhœa, in a more or less intense degree, that they have, in consequence of professional advice, been in the habit of injecting tincture of opium, more or less diluted, into the rectum, and even into the urethra, with a view to the suppression of the nightly emissions. The opiate injection occasionally relieved for the time; but ultimately very injurious consequences were the result. In some cases, no benefit whatever accrued; but on the contrary, all the symptoms became worse immediately upon the first use of the laudanum as an injection,—that is, it was immediately attended with headach, flatulency, impaired digestion, or even complete indigestion, drowsiness, with langour, and a feeling of great debility. One very constant and remarkable effect was, a gradual diminution, and at last a complete disinclination to all sexual intercourse.

When a gonorrhœa is neglected and badly treated at the commencement, it re-appears from very trifling causes; the follicles of the prostate are frequently destroyed by the inflammation; the ejaculatory canals dilated, the orifices ulcerate, the inflammation extends to the vesiculæ seminales; and in some cases the seminal ducts become so much relaxed, that emissions take place precipitately, without the penis being erect, and without pleasure; and it also escapes when the patient is voiding the last drops of the urine, for the communication between the ducts and the prostatic portion of the urethra being open and patulous, the necessary contraction to expel the last drops of urine forces out the seminal fluid at the same time. One or two nocturnal emissions, when they take place under these circumstances, may

produce considerable prostration. If persons marry before these parts have completely regained their healthy action, the constant fatigue of these organs produces quick ejaculations, because the excretory canals are irritated, the fluid is expelled in proportion as it is secreted, the loss is considerable, because the testicles participate in the irritation of the excretory canals, the inflammation may, by degrees, extend up the urinary passages, reach the bladder, the ureters, and terminate by inducing destruction of the kidneys.

We frequently find in the medical treatment of spermatorrhœa, that anti-spasmodics and tonics, emollients and excitants, repose and fatigue, produce good and bad effects in the same individual, in proportion as irritation or weakness predominates. Cauterization, at the same time, opposes these two orders of symptoms by destroying the surface of the engorged tissues, it alters the morbid susceptibility, resolution afterwards causes contraction, which gives the vessels a new energy. This is why cauterization almost always produces a decisive cure, when the ducts are patulous.

But when the disease is of long standing, the genital organs participate in the general debility. After chronic inflammation has disappeared, we must aid the relaxed tissues in recovering their former tone; therefore the various tonics are useful and indispensable to complete the cure begun by cauterization.

Debility of the system is a general consequence, and various tonics have been extolled as anti-venereals; none, perhaps, of this class have retained so high a character as sarsaparilla, and although its reputation has experienced the various vicissitudes of conflicting opinion, yet it still has maintained some position in professional estimation. Sarsaparilla, either the simple or the compound decoction, may be given in tolerably large doses, till some degree of tone has been restored.

With some, the extract, or the fluid extract rubbed down in water agrees better; and when the digestion was much engaged, its combination with the extract of taraxacum, or dandelion, has appeared to me to exert a very wholesome influence.

Quinine is a very powerful tonic, and though applicable when the strength has been in some degree recovered, perhaps it is

not quite suited to the weaker conditions of the digestive powers in this disease in its more aggravated forms. In some cases, bitters are indicated, and by increasing the appetite and improving the digestion, they tend much to restore the health.

When masturbation has been the cause of spermatorrhœa, it is often followed by nervous disorder, appearing in giddiness, dimness of sight, &c. In some, real amaurosis is the consequence. Of this consequence Mr. Travers mentions one or two instances:—"The most pitiable cases of amaurosis," says he, "are those of early life, from excess of sexual indulgence, and especially of solitary vices. The following are strong examples:—A country lad, of robust constitution, became the alternately favoured paramour of two females, his fellow-servants, under the same roof. He was the subject of gutta serena in less than a twelvemonth. Another at an early period of puberty, suddenly fell into despondency, and shunned society. He never left his chamber but when the shades of night concealed him from observation, and then selected an unfrequented path. It was not discovered till too late that, in addition to other signs of nervous exhaustion, a palsy of the retina was the consequence of habitual masturbation."* The following occurred to myself in July, 1846:—

CASE.—A gentleman applied to me complaining of dimness of sight, pain in the head, and defective vision. He constantly saw a number of black specks floating before the eyes, and substantial objects appeared double, and variously coloured or otherwise marked. Thus, a candle, for instance, appeared broken, variously figured, and sometimes greatly distorted. He had lost his appetite; suffered from nervous palpitation of the heart; incapability of attending to business; pain in the back and loins; and a feeling of lassitude upon the slightest exertion. With these, all sexual desire had completely vanished.

On examination, I found the urine of low specific gravity, and containing a large quantity of seminal fluid. The patient himself admitted both diurnal and nocturnal pollutions. The retina

* On Diseases of the Eye, p. 145.

of the right eye was paralyzed, and the amaurotic appearance of the left excited my fears, that it would also be sacrificed, and so subject the patient to total blindness.

As the bowels were rather torpid, purgatives were administered freely, and in tolerably active doses. Counter-irritation was applied to the back of the neck. Alteratives, as the plumber's pill, were then resorted to, and tonics, such as zinc, quina, &c., administered, and he was allowed generous diet and liberally of port-wine. I also cauterized the urethra, which had a very satisfactory and beneficial influence upon the pollutions; and the gums becoming tender, the fulness and pain in the head disappeared. The *vegetative* secretions became more natural and healthy. I then directed for him *arnica* internally, and exposed the eyes to the vapour of ether. The pollutions beginning to re-appear, the cautery was again applied to the urethra. This was attended with a return of the sexual powers; the general health rapidly improved, and the left eye was fortunately saved. But the right, notwithstanding blisters to the temples, electricity, the use of strychnia, capsicum plasters, croton oil, veratria, &c., was irrecoverably lost. All the above had each and all a fair trial, but without any sensible benefit. In other respects the patient got quite well.

Since the last edition of this work, I have had under my care a number of similar cases, in which incipient amaurosis was the most obvious symptom. I have invariably found that the treatment above described, if energetically pursued, will arrest the disease, and restore vision; but if it be suffered to proceed till the retina become paralyzed, every kind of treatment will fail to restore the sight; and all we can do, will be to endeavour to restore the general health.

When masturbation has produced the disease, perhaps after cauterization, the most powerful and effectual renovator is steel. Iron, I believe, is applicable to the debility of any of the forms, but my experience compels me to look upon it as the most powerful tonic in cases of self-pollution.

Of the several forms of iron, the tincture of the muriate is the best of those enumerated in the *London Pharmacopœia*. The *Mistura Ferri Composita* is unquestionably the most active.

The myrrh and alkaline salt intermixed, frequently disagree in the debilitated stomachs of such patients.

Iron, as observed by my friend Dr. Venables, is most efficacious in the state of protoxide. This is its state in the famed *Mistura Ferri Composita*, or celebrated anti-hectic mixture of Griffith; but one of the chief objections is, that the proto-carbonate so rapidly passes into the per or sesqui-oxide of iron. Dr. Venables has lately conferred a great benefit upon the public by his researches into the medical preparations of iron. The proto-carbonate, as already observed, is by far the mildest and the most powerful pharmacopœial preparation; but as ordinarily prepared, independent of its ready spontaneous transition into peroxide, it is insoluble, and consequently less efficacious than when in solution. From the rapid transition, it must be administered immediately it is prepared. Hence Dr. Venables suggests the administering the proto-carbonate of iron, prepared and held in solution "by water highly surcharged with carbonic acid gas." Water thus acidulated, takes up and holds a large quantity of iron in solution, and the carbonic acid forms it into a very agreeable effervescing draught, correcting the taste, and rendering it not only agreeable, but actually a sedative to the irritable stomach. This medicine is prepared by an aërating apparatus, patented by Mr. Bakewell, and manufactured and sold by Knight and Sons, Foster Lane, Cheapside. Dr. Venables has published the result of his inquiries, which contains a mass of very valuable therapeutical information.

I have in several cases administered iron in the forms, and prepared according to the directions given by Dr. Venables* in his essay on Aërated Waters, and from experience, I can speak with confidence of their efficacy. In some cases bitters may be conjoined with the chalybeate, those at least which contain no tannin, as quassia, colomba, &c.

While thus endeavouring to re-establish the general health, we must not lose sight of the cause of the disease, and if there be any probability of a renewed application by the patient, we must adopt some more powerful argument than persuasion to insure

* Dr. Venables' Treatise on Aërated Medicines. Published by Knight and Sons', Foster Lane, Cheapside.

our object. If in the case of self-pollution, no precautions be taken to prevent repetition, no amendment can be expected; on the contrary, the disease will be inveterated, the symptoms will become more severe, and the disease be aggravated rather than controlled by the tonic treatment suggested.

Now in cases of masturbation, and in cases of excessive sexual indulgence, the use of Ung. Antim. Potassio-Tartratis: Emp. Lyttæ, or the Acetum Cantharidis, will completely prevent the abuses and excesses we are considering. A rather curious incident first suggested to me the idea of a preventive, which the history of the following case will fully explain:—

CASE.—Mr. —, connected with a wholesale house for which he used to travel, became gradually enervated, suffering, as I may briefly observe, from the symptoms I have described, as more specifically characteristic of the disease under review. The health gradually declined, the strength failed, and the patient was at last obliged to withdraw himself from his occupation, that of a traveller, and to confine himself to transactions but a short distance from home. This patient had the reputation of being an extremely moral, fastidious, and abstemious young man, which I believe was the case. Notwithstanding, in an unguarded moment, he contracted a violent gonorrhœa, attended with inflammation and intolerable chordee. These symptoms proved very obstinate, and in consequence of the delicate state of his health, little more was done than giving hyoscyamus as a sedative, and applying cold water to the penis, to prevent painful erections.

I ascribed the severity of these symptoms to the impaired state of the general health, and felt greatly alarmed lest the inflammation might run into sloughing or even gangrene; and I consequently felt rather diffident in attempting any active measures. I found, however, the more severe the inflammatory symptoms, the more the patient's health improved, and that when the inflammation had abated to a certain point he relapsed. Thus the gonorrhœa and the general health seemed to undergo alternate exacerbations and remissions. He now used, contrary

to my direction, some injection of a strong solution of acetate of lead, which brought on swelled testicles or hernia humoralis, with suppression of the gonorrhœal discharge. The pain was intense, and what appeared at first sight surprising, the patient's health, notwithstanding, greatly improved.

Reflecting upon these circumstances, I began to suspect that the gonorrhœa, when sufficiently severe, acted as a preventive, by restraining the patient from indulgence in a pernicious practice (for I had learned previously the nature of his complaint), in which he indulged to a very great extent. It therefore occurred to me that if I could keep up a certain degree of soreness of the penis, I should accomplish one great purpose—restraining the patient from indulgence in pernicious habits.

Hence, if we feel satisfied that the patient indulges in the manner stated, nothing will tend to control this so much as the application of some irritant to produce pustules, or vesication. The ointment of Antimon. Potassio-Tartrat. soon causes irritation and pustules, and the effect may be expedited by the application of the Acetum Cantharidis. A fold of linen, wet with the diluted liquor, should envelope the penis, and as it dries should be re-wetted; this causes inflammatory irritation of the skin, and the Ung. Ant. Potassio-Tart, then acts speedily.

It has been stated that the condition of the testicle in these cases is often peculiar. The epididymis is thickened, indurated, and frequently nodulated. There is no remedy with which I am acquainted, so powerful in subduing this state and restoring the testicle to its healthy condition, as the *bichloride* already mentioned. I have sought in vain for an explanation of this, but although some of the most eminent surgeons whom I have met in consultation have prescribed it, none could offer any explanation beyond the simple fact that experience had proved its efficacy, and confirmed its activity as a remedy. From my own experience, I can only assert that it has proved a most valuable auxiliary in my hands, but I never found it of any benefit when the epididymis, in one or both testicles, was not in the morbid state already noticed; but when this is the case, I think every other treatment will be found useless, and that the bichloride alone will cure the patient. As examples of the efficacy

of the bichloride, I shall detail the following cases which lately occurred to me.

CASE.—A gentleman consulted me in July, 1843, under the following circumstances:—It appeared from the previous history, that he had been suffering for many months from the acute stage of gonorrhœa, for which he used a variety of remedies; cubebæ, copaiba, &c., and some of the most potent astringent injections. The result was acute inflammation of the testicle, ending in chronic enlargement and hardening of that organ. At this period he first observed that his desire for sexual indulgence had remarkably decreased, and had at last become extinct, which caused him much uneasiness, and he called upon me. I found his mental powers very much impaired; and although in the very prime of life, his health and bodily strength rapidly failed. Naturally warm-hearted, and full of life, vigour, and spirits, he had become chilled by disease, obtuse, callous, and indifferent.

On examining the testicle, I found the epididymis in the state already mentioned, enlarged, indurated, with a rough tuberculated feel. I commenced by giving tone to the general system—for I found it very much debilitated—by administering the various tonics I have before mentioned. I then used the “*porteaustique*,” according to the directions of M. Lallemand, and this was applied twice: the tonic medicines, though continued for some months, produced but little benefit. He continued in this way under my care for several months, and I gave up all hopes, as he had been under the care of some other practitioners, of being able to render him any material service. Without anticipating the same benefit from its use, for the ordinary attention had been given to the swelled testicle for a considerable time, I determined as the last resource to try the bichloride. I therefore gave it in combination with sarsaparilla. He continued the use of the above with very little intermission for some months, when I was agreeably surprised to find that the epididymis began to feel softer, to decrease in size, and at length to become quite natural. He pursued this plan, with some other adjuncts directed to improve digestion, regulate the bowels, and strengthen

the system, for some time, when I found that the testicle was restored to its natural condition; his health renovated; that his sexual appetite regained its former keenness, and, in fact, the patient was in the full enjoyment of health and natural vigour.

It is a constant feature in these cases that, in consequence of the effects upon the nervous system, there is a dissatisfaction, a restlessness, and an impatience under every plan and regulation, that renders the treatment, however well directed, unsuccessful. Thus, they apply for professional assistance, and after a few visits, and an imperfect trial of the plan suggested, feeling no amendment, they fly to others in rapid succession; or, broken down both in spirit and in strength, they become at length the prey upon which the nostrum-mongers feed. The case which I subjoin affords an example; and I understand that, after consulting a number of the most eminent and respectable surgeons in London, he paid twenty pounds to one of the advertising quacks about town, who engaged to cure him in a month.

CASE.—The gentleman alluded to above consulted me in October, 1843. He was a remarkably fine, healthy looking man. He told me that he had never suffered in his lifetime from illness of any consequence, with the exception of having been confined to his room for a few weeks, with swelled testicle, attended with intense pain and acute inflammation, which it had proved a matter of some difficulty to remove. When, however, the acute symptoms and swelling had subsided, he discovered, that although the appetite remained, the power of sexual gratification was entirely lost; nor could he exert it under any circumstances. This produced a considerable degree of mental excitement and vexation, by no means abated by the fact, that he was engaged to a lady of considerable fortune, great attractions, and superior attainments. He had consulted a number of the most eminent surgeons, but being extremely anxious and impatient, he passed from the care of one to another with such rapidity, that he destroyed every chance of benefit.

Having had some hints relative to this line of conduct, when he consulted me, I declined undertaking the management of his

case, unless upon certain conditions, which were, first, that he should adhere strictly to the plans laid down for him; secondly, that he should persevere for at least six months. I then explained to him my views of the cause of failure, viz.—his constantly changing his medical adviser, and throwing himself into the hands of incompetent persons, without affording the skilful surgeons whom he consulted sufficient time to effect any good. Having acknowledged the justness of my remarks, and acquiesced with my proposals, I undertook the management of his case.

On examination, I found swelling and some remains of hardness in the testicle; the epididymis in the condition already mentioned as peculiar to these cases. Under such circumstances I prescribed the bichloride, in the use of which he persevered for several months. Although upon some occasions he took other remedies, still I cannot but assign all the credit of his recovery to the bichloride. The effect of this medicine at first and for some considerable time, was in no way apparent, but at length, upon a strict perseverance, the testis began to get softer and to become natural. The induration in the epididymis also gave way, and at last disappeared by almost imperceptible degrees. When the epididymis recovered its natural state, not only the appetite for, but the capability of, sexual indulgence returned.

To insure the effect of this medicine and a perfect recovery, a perseverance in its use for a sufficient period is absolutely essential. This will be exemplified by the following case, which occurred to me somewhat about the same time:—

CASE.—In the early part of May, 1843, a gentleman from the country called upon me, to request that I would prescribe for him. He stated that some time ago he had come to London to be married, and that the marriage was to be celebrated in three months, when he discovered that his sexual desires and capabilities were both extinguished. Looking upon this as the effect of mental or some nervous emotion, I endeavoured to re-assure him, and to convince him that he would be soon restored. He seemed delighted with my assurance, and at once commenced

upon the plan I suggested, which he regularly pursued for two months ; but I regret to state, without the slightest benefit. I now proposed to examine the testicle, when, to my utter surprise, I found the epididymis of both testicles enlarged and indurated. As he was a man of a very religious turn of mind, I never for a moment suspected that his disease was referable to any impure or illicit cause. He assured me that he never had swelled testicle in his life, nor that had he ever indulged in any vice whatever. Nevertheless, he did not, satisfactorily to my mind, account for his knowledge of his own impotency.

I directed him to take the bichloride, which he continued for a short time, when he became dissatisfied, said that he had been always disappointed, and I lost sight of him, having understood that he consulted somebody else. I have had no opportunity of learning the result, but I know that he has not been married yet, if this can be construed into any indication of what may have happened.

The following case is another in which the efficacy of the bichloride, when sufficiently long continued, is satisfactorily proved :—

CASE.—A gentleman from one of the manufacturing districts, who had occasion frequently to visit London, on one of these occasions unluckily contracted gonorrhœa. This was attended with high inflammatory action, producing swelled testicles, which confined him to bed for several days. On the subsidence of the inflammatory symptoms, he left London, the testis continuing enlarged, but not painful. On his return home, however, he discovered that he had lost all sexual power. This was the cause of a good deal of anxiety and irritability of temper, as the impotency continued without intermission for the space of two years, notwithstanding he had consulted some of the ablest men in his neighbourhood.

A patient, whom I relieved from stricture, persuaded him that he was suffering from a similar disease, and strongly urged him to consult me. On examination, I found the urethra perfectly healthy ; but I found the testis still enlarged, and somewhat hard, the epididymis indurated. I now apprised him of my

view of his case, and urged upon him the necessity of perseverance, even though he should not experience any benefit for a considerable time. I then prescribed the bichloride, which he took for some months before he perfectly recovered, which, however, he ultimately did. I have frequent opportunities of seeing this patient, and he invariably informs me that he feels perfectly well and completely cured.

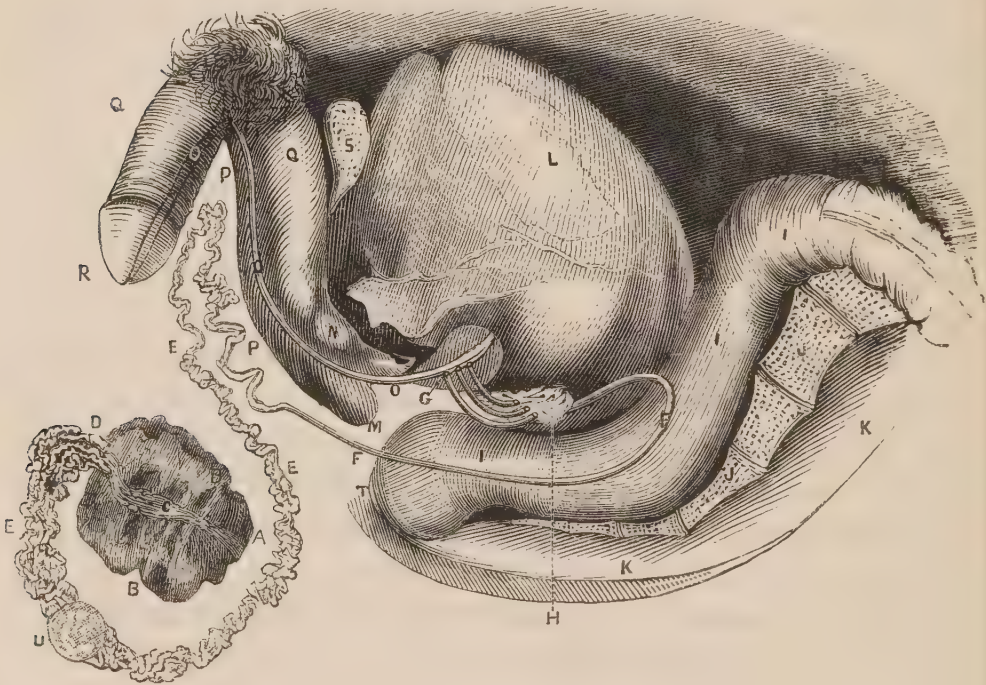
From these cases it will be seen that impotency very often arises from gonorrhœa, as well as from venereal affections generally; and in such cases, though I have *not seen* the fact noticed in any of the numerous authors that I have consulted, I usually find the *epididymis indurated* in the manner I have mentioned. This is certainly a matter worthy of observation, and perhaps, when more minutely investigated, may tend to throw some light upon the matter.

Since a former edition of this work, numerous cases of a similar character have come under my care, in all of which there was induration of the epididymis. The bichloride proved of the greatest use, and I have not yet seen or heard of a case where it was persevered in sufficiently long, where it did not succeed in removing the hardness and curing the patient. Many of my professional friends, extensively engaged in both public and private practice, have ordered it with the same beneficial results. The superiority of this plan of treatment, when the epididymis is indurated, is now acknowledged by all the scientific portion of the profession. A reference to the plate will at once explain how it is that induration prevents the secretion of the testicles passing onwards to the vesiculæ seminales, and thus causing impotency.

It was my lot, in the period of my pupilage, to be placed in the residence, and under the superintendence, of a professor of high standing and very extensive practice. Had I not resided in the house of this gentleman, and thus enjoyed numerous opportunities, I never could have imagined that so many persons, immediately after marriage, became, or at all events, complained of having become, impotent. This can only be referred to impure indulgence before marriage, and the excitement which usually supervenes, or succeeds to this state. Although many

of these are to be referred to mere functional, or temporary derangement of the nervous system, and require only a little re-assurance and gentle medical treatment for their relief, yet I am satisfied from experience, that many cases of confirmed sterility occur under such circumstances.

PLATE IV.



Explanation of the Plate.

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| A. The body of the testicle. | D. The vasa efferentia. |
| B B. The tubuli testis. | E E. The epididymis. |
| C. The rete testis. | F. The vas deferens. |
| G. The ducts which convey the seminal fluid to the prostatic portion of the urethra, and when open allow the seminal fluid to escape with the urine and on going to stool. | |
| H. The vesiculæ seminales, showing the spermatozoa conveyed by the vas deferens from the testicles. | |
| I I I. The rectum. | O O. The urethra. |
| J J. The division of the vertebræ. | P P. The corpora cavernosa. |
| K K. The skin divided. | Q. The body of the penis. |
| L. The bladder. | R. The glans penis. |
| M. The bulbous portion of the urethra. | S. The symphysis pubis. |
| N. The corpus spongiosum. | T. The anus. |
| U. The epididymis indurated, which explains how impotency is produced by preventing the seminal fluid passing to the vesiculæ seminales. | |

When masturbation has been practised to a great extent previous to marriage, impotency is a very frequent, and often immediate, result. The incessant discharge from the urethra which constantly attends in these cases, and the microscopical examination of the discharge itself, will always be sufficient for correct discrimination.

In such cases, there is no means with which I am acquainted that proves so active or so beneficial as cauterizing the urethra with the *argentum nitratum*; indeed, it seems to be the only effectual means. This practice, first introduced by Professor Lallemand, appears to act on the seminal vesicles and follicles of the prostate gland. Farther, it allays the morbid sensibility, and corrects the altered condition of the membrane and orifices of the ejaculatory canals, and thus arrests the excessive secretions of the testicles and prostate.

The nitrate of silver, when applied to the diseased part of the urethra, appears to act on the seminal vesicles and follicles of the prostate gland, very much in the same way as a stimulating application to the conjunctiva of the eye, being absorbed at the puncta lachrymalia, relieves a morbid condition of the membrane of the nasal sack or ducts. The dissolved caustic, entering at the enlarged orifices at the sides of the vera montanum, reaches the interior of these glands.*

Mr. Curling seems to think that Sir E. Home was not altogether unacquainted with the efficacy of the *argentum nitratum*, in cases of seminal emissions resulting from solitary abuse, and mentions two cases which were greatly relieved by the use of armed bougies. This mode of application, however, is very defective, and quite inadequate to the purpose. The instrument devised by Lallemand is the most perfect, and indeed affords the only effectual method of applying the cautery.

It consists of a middle sized catheter tube, open at either extremity, but closed laterally; that is, not perforated by lateral holes, as the ordinary catheter is. It is slightly curved at one end like a catheter, but straight at the opposite. It is filled with a flexible stilette, named "porte-caustique," or caustic

* Curling, &c. p. 416.

holder. The caustic holder is terminated by a round button-like head, which can pass through the tube; but as the caustic holder is longer than the tube, it can be pushed beyond the extremity for an inch or so. The part which proceeds from the button-like head, has attached a piece of platinum formed into a groove. The stilette is some inches longer than the tube, and is furnished with an adjusting screw, by which it can be firmly fixed at any length, so as to expose any required portion of the groove by projecting it beyond the end of the canula.

To use the instrument, we put the nitrate in powder into the groove, and fuse it in the flame of the lamp, by which, when it cools, it becomes firmly attached to the walls of the groove. It is advisable to wrap the whole in a piece of platinum foil, and fuse it for a second or two in the flame of the blow-pipe, because when held in the flame of the spirit lamp, the carbon and hydrogen in combustion act as a flux, and partially reduce the salt. The stilette thus prepared, with the groove armed, is to be placed in the canula, and the adjusting pin being arranged, the stilette, with its armed groove, is to be drawn within the canula till the button-like head is close to the open end—in fact, resting against it. It now resembles an ordinary metallic bougie, and as such, is to be introduced into the urethra, and passed on till we arrive at the diseased spot. We now push the stilette onwards, the armed adjusted groove is exposed, and the nitrate comes in contact with the diseased portion of the urethra, prostate, or wherever else we may wish. If the exposed part be rolled once round, the whole circle of the urethra will be subjected to the action of the cautery; but when the object is to touch merely a single spot, this is done by introducing and arranging the stilette, so that the armed groove shall be opposed to the disordered spot. The instrument so adjusted is introduced to the required length, and the stilette being once or twice pushed forwards, and again withdrawn, the application will be complete, and the apparatus may now be removed from the urethra.

The effects of the nitrate when thus properly applied are very satisfactory; one or two applications generally put an end to the diurnal pollutions, and the weeping from the urethra mostly

ceases, although this latter may perhaps require three or four applications before it can be completely arrested.

Since the first edition of this work, I have applied the cautery in upwards of one thousand cases of spermatorrhœa, a great number of which were those of members of the medical profession, and gentlemen in attendance on lectures; nor have I yet met with a single case that has not been more or less benefited. Not that I mean to assert that I have been always successful in every case. Many who have come under my treatment, in consequence of suffering from varicocele and other serious functional derangements, were but partially relieved. I wish it to be perfectly understood, that it is impossible that cauterization can restore the testicles to their healthy state, when they have become organically diseased; or replace any part of the genital apparatus previously destroyed. But I again assert, that when the ducts are patulous, and consequently allow the seminal fluid to escape on the patient going to stool, or with the urine, which I have found to be invariably the case, cauterization is, I am satisfied, the only treatment that will restore such patients to health. It may not cure all, but each will be more or less benefited, by laying a foundation for the successful use of other means, and by far the larger majority perfectly cured.

I have been obliged to apply the cautery occasionally two or three times, and even more frequently, before I succeeded in arresting the nocturnal and diurnal pollutions. In some obstinate cases I have been called upon by some of my patients previously cauterized, to again apply the nitrate, in consequence of some of their old symptoms re-appearing after a period of twelve or eighteen months, occasioned by too free indulgence. In most of these cases the symptoms were immediately relieved by a single application, and without much inconvenience, the urethra having been accustomed to the introduction of the instrument.

The application of the cautery causes but little inconvenience at the time, particularly if the patient takes a warm bath, so as to relax the urethra, and allow the porte-caustique to pass readily to the prostate. For about twenty-four hours after the cauteri-

zation, the patient suffers sharp pain on passing water. Rest, however, and barley-water are all that is necessary, and in most cases they remove the scalding. I always prohibit horse exercise, stimulating drinks, and recommend quiet for one or two days. By seeing that these instructions were attended to, I have never met with a case where it became necessary to continue their observance longer than four days; and notwithstanding the great number of cases which I have cauterized, I have never seen any ill consequences result from it. Further, I feel satisfied, that if judiciously performed, it will never do any harm. Lallemand fully confirms this opinion. He observes, that "It is now twenty years since I first commenced cauterizing the urethra. Since that time I have cauterized the urethra almost daily, and never knew the application to do any harm."

The inflammatory symptoms are followed by a feeling of strength; the urine is not passed so frequently, nor secreted in such large quantities; erections take place during the night, and if an emission should follow, it is quite of a different character to the previous discharges. The patient generally awakes with pleasurable feelings; the emission is not followed by the previous debility or despondency. The irritation that existed in the urethra, bladder, and rectum gradually diminishes, and at length altogether subsides. Sleep returns, which is refreshing and invigorating; the desire and power for sexual gratification is ultimately regained. The mental functions are the last to recover their healthy tone and power.

Notwithstanding the opposition I have met with, for boldly and fearlessly stating my opinion in direct opposition to high authority, I now enjoy the largest practice of any man in the kingdom, in the treatment of spermatorrhœa. Nor does the hostility of the profession constitute the only difficulty with which I have now to contend. The editor and proprietor of a journal, determined to force his son into professional notoriety, has availed himself of all the means, which a malicious and corrupt prostitution of his journal placed at his command, to represent the subject upon which I have written as indelicate, and subversive of public morality. Had I been dependent upon

my profession for subsistence, the pressure from without in the early part of my professional career, would have compelled me, long ere this, to have yielded to circumstances, and to have altogether abandoned my profession, as has been the unhappy lot of numbers of others before me, who have engaged in the attempt to introduce a necessary and much required reform into the practical departments of surgery. Numerous examples of this kind will readily present themselves to every professional reader.

I have been betrayed into these remarks in consequence of having been repeatedly informed by medical gentlemen whom I have professionally attended and whom I have met in consultation, that the reason why they did not give to spermatorrhœa the attention which it deserved, was their fear of being associated, by the editor of the journal previously alluded to, with the advertising Jews, whose advertisements so constantly appear in all the papers.

I have been frequently consulted by patients who informed me that their urethra had been cauterized, some with a BOUGIE, others with a *catheter*, &c.; of course, without benefit. In none of these instances had the instrument reached beyond two or three inches from the orifice of the urethra. These persons expressed their surprise, when the porte-caustique was introduced, and passed much further from the orifice than they had been led to believe the disease existed.

In answer to numerous anonymous medical correspondents, I may here state, that it is impossible for any one to cauterize his own urethra; and that without the seminal ducts in the prostatic portion of the urethra be cauterized, no benefit can be expected to follow. We might as reasonably expect to be relieved from tooth-ache by applying kreosote to the tongue, as contraction of the seminal ducts to follow the application of the cautery to the bulbous or membranous portion of the urethra. I wish to impress this upon the mind of the professional reader, for we constantly see many and valuable remedial agents fall into disuse, in consequence of not being properly directed.

I was suddenly summoned one morning to visit a patient whom a surgeon had been cauterizing, and who, on withdrawing

the canula, entangled a portion of the mucous membrane with the button-like head of the porte-caustique. This prevented the extraction of the instrument, and he became alarmed by the pain occasioned by the effort to withdraw it. When I arrived, I released the mucous membrane, by unscrewing the top screw, which enabled me in a moment to withdraw the canula, and then the caustic-holder immediately followed. Fortunately, the case did much better than might have been expected under such circumstances.

CASE.—I was suddenly sent for to visit a gentleman at the West-end, and on my arrival received the following account, which I give nearly as he gave it to me:—

I arrived from India eight months since, where I had been residing for some years. During the voyage home, I suffered very severely from irritation of the bladder, and nocturnal emissions, which were greatly increased by my being obliged to lie upon my back. On my arrival at Portsmouth, I purchased a book advertised in one of the papers. The perusal caused me to write to the author. I sent him a minute detail of my symptoms, and also informed him what I supposed to be their cause. The reply was, that he would undertake the case, and insure me a perfect cure, for forty pounds. I remitted him the money, and in return received some medicines, which I took for a considerable time, without any benefit. Instead of improving, my symptoms got worse, and others which I had not experienced before, came on—such as indigestion, constipation, acid eructations, which latter I attributed to the acid medicines I was directed to take. After going on in this manner for three months, I determined on coming up to town, principally at the suggestion of a gentleman, who had been under your care. I first, however, called upon the person to whom I had paid the forty pounds, when I informed him that I felt no better—on the contrary, that during the last two months, I had become much worse. I then told him that a friend of mine, who had been much worse than I ever was, had been cured by you in less than a month, by cauterizing the urethra. His reply was, that he had had more experience in that practice than all the medical

men in London put together, and that if I would call upon him the following morning, he would cauterize the urethra. Having contracted and paid him for my cure, I consented, and called upon him at the time appointed. The operation was performed, but it gave me considerable pain. I immediately went home to my lodgings in a cab. My sufferings became greatly increased. I immediately sent off a messenger to the cauterizer, to inform him how bad I was, and request that he would call and see me, as I was suffering most acutely from his operation. The reply I received was, "*That he never went out to visit any patients.*" I have therefore sent for you, and you see the state I am in, and for heaven's sake try and relieve me.

I found the penis very much swelled. The orifice and urethra itself seemed as if a solid piece of caustic had been introduced, unprotected, into the urinary canal. I was apprehensive of retention of urine, the patient feeling a constant and urgent desire, but without the ability to empty the bladder. I immediately injected warm oil into the urethra, to protect the mucous membrane; gave a large dose of camphor and hyoscyamus, to allay irritability; put my patient into a hip-bath, and gave him plentifully of mucilaginous fluids to drink. This treatment fortunately succeeded in preventing retention of urine; but the spermatorrhœa was greatly aggravated by the violent inflammation. The emissions became greatly increased in number; a large quantity of vitiated seminal fluid, frequently mixed with blood, being emitted. I now prescribed cold baths, sedatives, a mild, unirritating diet, and other remedies, for checking these discharges, but without benefit.

I now submitted to him the necessity of cauterizing the ducts; but he strongly objected; nor would he consent, till he found, and became convinced, that all other remedies had failed to afford any relief. I then cauterized the prostatic portion of the urethra, which caused him little inconvenience, the pain not lasting more than ten minutes; and the scalding which he felt on passing water disappeared altogether in two days. The nocturnal emissions, and the seminal discharges at stool, and with the last drops of the urine, greatly abated; but I was obliged to cauterize the urethra twice more before they entirely dis-

appeared. The patient, however, left town completely cured of his spermatorrhœa, and I have been informed that his general health has been since perfectly re-established.

OBSERVATIONS.—This case presents several features of no ordinary interest. First, the patient attacked on board a ship, during a long voyage, naturally embraced the first opportunity which presented, of affording, or at least promised to afford him relief; with what advantage, the history and circumstances have shown. There is another circumstance, which will show the danger of self-sufficiency. The party who attempted to cauterize the urethra, it cannot be questioned, performed the cauterization most effectually, in the strict and literal acceptance of the term; but this does not show that the cauterizer had the most distant idea of either the principles or the objects of its performance. On the contrary, the facts prove the grossest ignorance. “Cauterizing the urethra” does not mean the application of caustic to the mucous lining of the canal, either partially or throughout the whole extent. We understand by the terms, the application of the cautery to a particular part, the prostatic portion where the ducts open, and which, being in a state of atony, or passive relaxation, permit the constant oozing, which invariably attends spermatorrhœa. The application of the caustic acts as a stimulus, restoring the ducts to their healthy tone, and through them the other parts which may have sympathized with them.

It was, and I believe even now is, the system to advise marriage as a curative in these circumstances, but I think upon very erroneous principles; at all events, experience does not confirm its prudence. Persons in this condition, complaining of a continual discharge from the urethra, nocturnal or other involuntary emissions, imperfect erections, &c., should endeavour to recruit themselves by restrictions, or celibacy, and not aggravate their disorder by entering into the marriage state. The unhappy effects of this plan, perhaps, will be rendered more apparent by the history of the following case:—

CASE.—A gentleman was suffering for upwards of two years

with a discharge from the urethra, which was looked upon as a sequela of gonorrhœa. He consulted a medical gentleman, under whose care he remained for nearly the above period, and who put him under the influence of copaiba, cubebs, and the whole routine of urinary astringents, administered, too, in the most extraordinary doses. The disease, however, still continuing unabated, this gentleman suggested marriage as a means of cure, which advice the patient adopted; and the consequence was, that I was shortly afterwards consulted by his lady, who was labouring under the impression that she was suffering from the effects of his previous delinquencies, as the gentleman stated that he had had a venereal attack or two previous to his marriage. However, I could not discover any satisfactory evidence of gonorrhœa, which would have been most in accordance with the lady's state; and although I endeavoured to assure her, by explaining that many ladies were often affected in a similar manner immediately after marriage, I could not succeed in removing the morbid impression from her mind. Under this conviction, she begged her husband to call upon me, when he stated that he had been affected in consequence of previous imprudence, and expressed his fears that he had infected his wife. However, I was soon able to satisfy him on that point; and I then learned the following particulars. The discharge from the urethra had been brought on by improper indulgence; and he now found that although he could not have a perfect erection, the most trivial circumstances caused a sort of seminal emission, and that during the night, he generally had from three to four or five nocturnal emissions; and although sleeping with his wife, he felt not the slightest desire, nor did he feel capable of the sexual act. This he said was productive of much uneasiness—indeed, unhappiness to both parties, and he felt in consequence very miserable.

I assured him that the case was not so hopeless as he imagined, and explained to him what it would be necessary to do. I therefore cauterized the urethra, which afforded very great relief; and the discharge was very much reduced. I advised him to separate a little from his wife, in compliance with which, he left

town for Brighton, where he remained two months, and then returned perfectly cured.

It cannot be too strongly impressed upon the mind, that marriage under these circumstances is very frequently indeed followed by impotency, which often, instead of gradually, makes its attack suddenly, and without any warning, so that the party is not aware, until he makes the trial, of his inability to consummate the venereal act. This will be fully exemplified in the history of the following case:—

CASE.—A gentleman consulted me, who premised frankly, that when very young he indulged to a very great excess. Being a gentleman of considerable fortune, he accustomed himself to wine and good living, and all the various stimulants so well adapted to excite the animal propensities. Every season he visited Paris, Rome, and other fashionable foreign localities, where he used to spend several months. Here he enjoyed the society of the fair sex, having introductions to all the most fashionable society. He now debased his feelings and his morals, by means too well understood to require further explanation here.

At length, satiated and disgusted, he determined to reform, and cultivate domestic comfort. With this view he made an offer to an accomplished, amiable, and beautiful young lady; was accepted, and on his marriage settled a very considerable property upon any male issue that might prove the result of this alliance. He had not been more than six months married, when he suddenly became completely impotent, and utterly incapable of the sexual act, which had the effect of souring his temper, giving a moroseness to his disposition, and rendering him truly wretched.

Under these circumstances he consulted most of the eminent medical men in London, and then went to France, where the urethra was cauterized; but he was obliged to leave and return to England before the effects could be clearly ascertained. On his arrival in England he applied to me (I believe at the suggestion of the operator), but as I found that the urethra had been cauterized two or three times in France, and that severe symp-

toms had set in, greatly aggravated most likely by travelling, I did not judge it prudent to repeat the cauterization. On the contrary, I found so much irritation that I was obliged to tranquillize the system by opium, hyoscyamus, and sedatives in general.

When irritation had subsided, he entered upon a course of tonic medicines, in conjunction with the alkalies and Ext. Hyoscy., using sea bathing, and abstaining entirely from all venereal gratification for six or seven weeks, when he returned home perfectly well, and his health completely renovated. His wife shortly after became pregnant, and in due time was delivered of a daughter, full grown and in every respect healthy.

Spermatorrhœa produced by unnatural venereal excitement is, there cannot be a doubt, much more difficult to cure than that occasioned by excessive sexual indulgence. The latter requires a participator, which is not always in readiness; but the former can be practised under almost every circumstance. I could relate some strange cases in illustration of these views, but they would be curious rather than instructive: I shall therefore omit them.

“The spermatic fluid,” says Dr. Smith, “which every person knows it is the office of the testicles to secrete, every one should at the same time be aware, is not, as is too commonly supposed, an excrementitious fluid, and intended, like the urine, to be eliminated from the body; but, on the contrary, (except during an occasional act of generation) to be received into the circulation, and thence distributed to every part of the system. It is the presence of the semen in the circulating fluid of the male, and the accumulated influence of the unexhausted ovaria in the system of the female, which gives to the countenance of the continent and chaste the peculiar expression of energy and vigorous health which generally characterize them, and which, though the features themselves should not be fashioned to the lines of beauty, never fails, notwithstanding, to impress the beholder with a sense of admiration and some feeling of respect;” while, on the contrary, the finest men and the most beautiful women who suffer from this disease must, sooner or later, excite our deepest commiseration, for the disorder in a few years

becomes so apparent, that it cannot be mistaken by the casual observer, and the practised eye will instantly detect, even in the early stages, the cause of the suffering.

Nothing is so apt to produce relapse as a return to former excesses, and we should endeavour to prevent this by every means in our power. Persuasions I find almost wholly useless, and I therefore resort to some of the preventives—Unguent. Antim. Potassio-Tart.—already mentioned. These are the only effectual persuasives, and they are always certain if their operation be kept up.

The connexion between urinary and cutaneous affections has been long since established, and is now generally acknowledged. Lallemand details several instances of this association. Sometimes the cutaneous affections are of the scaly character, sometimes papular or tubercular. In several instances, the cutaneous disorders were soon followed by urethritis. Impotency not unfrequently supervenes, and often proves obstinate, perhaps from the connexion being overlooked. The following case of lepra shows something of this association :—

CASE.—In May, 1842, a gentleman consulted me, in consequence of a leprous affection from which he was suffering, and which had resisted, for years, every plan of treatment adopted for its removal. The body was completely encased in the eruption, and the scales detaching, while others replaced them, falling in such quantities during the night that it was necessary for the chambermaid to collect them every morning in the dust-pan. I directed for him the Liq. Arsenici Iodid. cum Hydrarg., to be taken three times a day, with four grains of Hydr. cum Creta, and six of the Pulv. Ipecac. Comp. at bedtime. He used an ointment of the Sulph. Hypochloridum externally. This plan he pursued for some months, which ultimately cured him. In a note which I received from him, conveying to me the pleasing intelligence of his recovery, he informed me that he was not the only person obliged, as the removal of the cutaneous disease was attended with that of another—impotency—from which he had been suffering for some years. As he had formed an early attachment, and entered

into a matrimonial engagement, which these two impediments completely marred, their removal proved a source of no small pleasure.

The following case will show that persons employed even in what might be considered healthy occupations cannot always escape :—

CASE.—A bricklayer, about five-and-thirty years of age, admitted that he had indulged in masturbation since about fifteen years of age, was suffering from an eruption of a pustular character, upon the face, chin, and forehead. Has constantly a discharge from the urethra. For several years has suffered from nocturnal and diurnal pollutions, attended occasionally with lascivious dreams. On going to stool he passes sperm, more particularly if the pollutions have been suspended for any length of time.

He is not much troubled with erections during the day time, but they mostly come on in getting into bed, and continue to torment him for the remainder of the night. He feels languid and weak; digestion indifferent, appetite good rather than otherwise. Sleep interrupted, head-ache always on waking, with thoracic pains, and considerable emaciation. Flatus sometimes distends the abdomen, at other times this is drawn in and contracted.

On the supposition that the discharge was a gleet, and that he suffered from stricture, a bougie was introduced, but no stricture could be detected. I cauterized the urethra three times, at an interval of about three weeks each time; he then took some alteratives, used the warm, and then tried the sulphureous baths, and was perfectly restored at the end of about two months.

CASE.—A young man who travelled for a commercial house, aged between thirty and thirty-five, consulted me, stating that he had been liable to a sort of herpetic eruption from his infancy. Latterly he has been subject to psoriasis about the scrotum and perineum. Has been subject also to a gleety discharge on passing urine or going to stool. Has occasionally a severe itching about the arms, especially when the bowels are at all consti-

pated. This itching is so troublesome, that sometimes he almost tears himself to pieces. Has used, by the advice of friends, drastic purgatives, to effect the expulsion of worms, to which the itching has been attributed; but has always the gleet much increased after these violent purgatives. The stream of urine much diminished, and the desire to pass it frequent and urgent. Flatulence, digestive powers weakened, his head dizzy, memory bad, physical powers much impaired, sleep very indifferent, but little repose, from which he always awakes confused.

I directed such remedies as seemed calculated to relieve the more urgent symptoms and to recruit the strength. I then cauterized the urethra, which had a most beneficial effect upon the gleet, which in reality was nothing else than seminal pollution. When, by these means, he was somewhat restored, I advised him to take a few warm baths, and afterwards the artificial sulphureous ones. The strength of these to be gradually increased to a certain amount. These baths, of which he took one every third day till he had eighteen, he used with the greatest benefit, all the cutaneous affections, with the itching at the arms, having completely subsided. He was cured in somewhat more than three months.

We are frequently consulted in cases of gleet, or at all events, by patients who imagine that they are suffering from gleet. After what has been already observed, I need scarcely state here that a microscopical examination of the discharge should always be instituted; as, otherwise, we may be deceived as to the real nature of the affection, and be prescribing remedies in vain for a disease which has no actual existence, while we are wholly neglecting that whose real existence is productive of all the misery and mischief. It may appear, perhaps, more candid than prudent to admit that, upon more occasions than one, I have split upon the very same rock of which I would warn others; and if this admission prove a beacon to preserve any of my professional brethren from a similar shipwreck, I shall not regret this acknowledgment.

In considering the treatment applicable to this disease, I have endeavoured as much as possible to avoid the ordinary routine of remedies. Their nature and mode of administration

are too well understood to require any detail from me. Indeed, any such, as wholly unsuitable, would be quite out of place here. I have endeavoured to confine myself wholly to the phenomena especially relating to a form of disease which has never been suspected to exist, much less been a subject of research by many, I may even say, the majority of the medical profession in this country. I have, therefore, limited myself to the consideration of remedies and modes of treatment altogether novel, leaving the more usual methods and their selection entirely to the judgment of the practitioner.

ULCERATION OF THE CERVIX UTERI.—Since the first edition of this work I have been consulted by several females, both married and single, who stated that they were suffering from deep-seated pain in the loins, of a “burning character,” and which extended to the lower part of the stomach, as they termed it. The married females stated that this pain was so severe and distressing in the act of sexual congress, that separation for a time became absolutely necessary.

In cases of this description I have observed that there is great reserve, a desire to be alone and entirely secluded, the expression of the countenance haggard and anxious, a deep melancholy seizes upon the mind, and many symptoms, similar to those which I have already mentioned as prevailing in spermatorrhœa, affect females suffering from this disorder. The disease is clearly one connected with and depending upon the condition of the uterus, for upon examining this organ with the *speculum*, I have found a thick whitish discharge in these cases tinged with blood exuding from the uterus. Upon removing this discharge so as to expose the part, I have found the mouth and neck of the uterus *inflamed* and *ulcerated*. The os is mostly *indurated*, as may be ascertained by the touch.

In all these cases, I have found the treatment practised in France, and more fully detailed by Dr. Bennett, when assisted by steel and the different preparations of iron, quina, and tonics generally, extremely beneficial. By such means the uterus is speedily restored to its healthy condition, and so fitted for the performance of its natural functions. Perhaps I cannot illus-

trate the subject better than by the detail of the two following cases :—

CASE.—Mrs. J——, who had resided for some time in a warm climate, suffered for a considerable time from the symptoms just enumerated. The physicians whom she consulted considered these symptoms as depending upon “uterine irritation,” which had been succeeded by a “corresponding torpor.” Aloetic purges, in all their forms and varieties, were administered, till the strength became alarmingly reduced, and the health seriously impaired. She ultimately became so weak, that it was not without considerable difficulty and danger she could be conveyed in her carriage to the steamer to embark for England. During the voyage she was attended by the family physician, who accompanied her; and on her arrival here had the benefit of the most eminent professional advice. Sedatives in large doses, and a variety of other plans were tried, with little or no benefit, and whatever did occur only temporary. I saw this lady under the above circumstances, and suffering most intensely.

On examination I found the os uteri and cervix hard and somewhat swollen, inflamed, and, to a certain extent, ulcerated. As the strength was much reduced, I directed tonics, cold bathing, astringent injections, and the *cautery* to the diseased portion. Rapid improvement took place in all the symptoms, and she very speedily recovered.

CASE.—Mrs. ——, under almost precisely similar circumstances, and with, as nearly as could be, the same symptoms, consulted me; when she stated that she had had the advice of almost all the principal medical men in London; after which she resorted to certain pseudo-members of the profession, in the hope of getting some relief. She was lately told by one whom she consulted, that she was suffering from “retroversion of the womb.” She never had any children, and the remedy proposed to her was “to puncture the uterus.”

On examination with the speculum, I discovered that the os uteri and cervix were deeply ulcerated, and a thick, viscid, muco-purulent discharge exuded in large quantities, coated these

parts, obscuring their condition. Although but lately married, the sexual act was attended with such excruciating pain, and so great a degree of nervous excitement, that she was forced to withdraw from her husband and occupy a separate apartment. The nervous irritation was so violent that it required the most powerful sedatives to restore anything like quiet or composure, and still their effects were but temporary.

I directed the most perfect quiet. The bowels being extremely out of order, and tending rather to constipation, a combination of the mildest purgatives, with tonics and hyoscyamus were directed. At first the warm-bath was prescribed, and this was followed by cold bathing. As soon as ever the violence of the symptoms was somewhat abated by these means, I applied the cautery to the diseased surfaces. The application of this agent had a marked and powerful effect. Indeed little else was done, excepting the occasional use of astringent injections. The cauterization was performed in all three times, and a very rapid and surprising recovery was the consequence.

The above I have selected out of many others, as examples of the necessity of examining minutely into the condition of the organs. It is quite clear that we might have prescribed the whole *Materia Medica*, without curing the two foregoing patients, or even effecting a tithe of the benefit effected by a single application of the cautery to the actual seat of disease.

This affection, as has been already asserted, may attack either the married or the single, and when prevailing in the former, proves a decided barrier to fertility. Indeed, it is absolutely impossible that impregnation can take place in such circumstances, unless we have previously removed the diseased condition of the os and cervix uteri. The thick and viscid mucus emanating from these parts will prevent the spermatozoa from entering the uterus, and passing up the fallopian tube, so as to impregnate the ovum.

It often happens that patients who have been suffering from nocturnal emissions, and which have, while they continued, proved very troublesome, find themselves suddenly, so far relieved, that the discharges at night altogether disappear; but notwithstanding, their feelings of misery, so far from abating, continue

to increase. I have met with many patients, who, having suffered in this way, had been assured by their medical attendants, that the disease, about which they felt so anxious, was completely cured. These practitioners, deceived evidently by the disappearance of the nocturnal emissions, were betrayed into the belief that a perfect cure had been effected. No error however, can be fraught with greater danger; and therefore I feel the more persuaded of the necessity of directing special attention to this important fallacy. The error consists in the belief that the emissions have ceased, whereas they still continue, with this difference, that the *nocturnal* are replaced by *diurnal* pollutions, the former disappearing and giving way to the latter; the system being unequal to, or incapable of the double discharges. That I am not singular in maintaining these views, I can appeal for confirmation to the experience of Lallemand, who thus observes:—"Both the patients and their medical attendants are led astray during the most severe periods of the disease, by the diminution or entire cessation of the nocturnal pollutions; diurnal discharges, the effects of which are much more serious, take their place; and this is why on the entire cessation of nocturnal pollutions the discharge becomes permanent, and complete impotency is often established."

But this discharge is unfortunately not discoverable by the patient, because the seminal fluid is intermixed with the urine, and requires time for its subsidence; if, however, the urine be allowed to stand for an hour or so in a glass, a thick cloud will be seen deposited at the bottom. Examination by the microscope as previously described, will clearly show the condition of the patient.

Seldom a day passes without patients applying to me, who state that they have most of the symptoms described in this essay; but that they have never had any discharge from the urethra; *the seminal fluid escaping from the patulous ducts and mixing with the urine escapes their detection*, and so they are deceived.

The cause of this form is an atony of the ducts; and when spermatorrhœa can be distinctly traced to such a source, I have found it ushered in at the commencement by forgetfulness,

head-ache, want of resolution, fear, and great debility. The emissions at night frequently take place without erections, dreams, or any pleasurable feelings, sufficient to mark the occurrence. It resembles a sort of *passive* discharge. Many of these patients are so insensible of the occurrence, that they are unconscious of any emission, till reminded of it by the gummy or sticky matter, as they term it, which they perceive on their night shirts, or bed linen next morning.

These patients also pass large quantities of seminal fluid when at stool, or while emptying the bladder; and the seminal fluid mixing with the contents of the bladder may be discovered in great plenty in the urine. The largest quantity of seminal fluid I ever found in the urine, occurred in the case of a patient suffering from atony of the ducts. Lallemand notices numerous instances of this kind; among which he relates the case of a young man who had been treated by distinguished practitioners both in England and Germany, for a chronic disease of the brain, but without any benefit. This individual suffered from frequent giddiness, occasioned by the escape of large quantities of seminal fluid, attended with such a weakness of the limbs, that he was fearful of attempting to walk alone. At length his mind became affected, and he became so far deranged that he doubted of everything he either saw or heard. By degrees his digestive powers became so much deranged, that his medical adviser recommended him to travel through Belgium and Germany. During his lengthened tour everything seemed illusory and fantastic; he fancied himself in a painful dream; he also imagined that every person he encountered was making a jest of him, and conspiring against him.

Three Englishmen who were pursuing the same route, became more immediately objects of his delusion. One, from an excessive indulgence in irony, attracted his especial hatred; and he was several times tempted, as he passed him, to pitch him over board into the Rhine. These hallucinations remained in the memory of the patient, even after he had been cured by Lallemand, like a kind of nightmare. Lallemand very properly proposes the question, whether if in one of his moments of rage, he had thrown his supposed enemy into the Rhine, would this

hallucination have been admitted? and if so would its cause have been suspected?

In cases of the description under consideration, the penis is remarkably insensible, small, flabby, and bloodless; the glans remarkably developed; and if the lips of the orifice of the urethra be separated, the mucous membrane lining the urethra, instead of its usual red appearance, seems blanched and pale. A full sized bougie may be passed up to the seminal ducts without causing much inconvenience, the urethra and neck of the bladder being very insensible. The testicles are generally small and ill developed; and hernia is by no means an unfrequent occurrence in consequence of the relaxed state of the tissue.

Some surgeons assert, that sexual intercourse will prove sufficient to effect every purpose; but from close and attentive investigation, I am satisfied that such statements are founded on error. To illustrate our propositions:—

If a person by accident should break the bones of his arm, he will be incapable, even after the bones have united, of the ordinary use and exertion of the limb. This inability depends upon weakness of the muscles, rendered feeble and inadequate from want of exercise, during the long period of rest necessary for the re-union of the fractured bones; the same applies to the muscles and other parts of the sexual apparatus enfeebled and torpid through disuse, and therefore incapable of performing their proper functions. If such persons follow the recommendation, and marry, before they are perfectly recovered, there is every probability that they will find themselves unable to fulfil their matrimonial obligations; and such inability never fails to cause the greatest anxiety and unhappiness, as my daily experience has fully proved.

Many professional gentlemen err and deceive themselves very much in their treatment of such cases. Patients, for instance, apply to them in consequence of sexual inability, but the practitioner makes their complaint a subject of laughter, and concludes by assuring them, that it depends altogether upon disordered imagination; and that if they will but divest themselves of these morbid fancies, they will speedily recover. Others again, direct large quantities of medicine, in the expectation

that they will thus effect a cure; while a third class recommends marriage, with the utmost confidence in its success. But the patients, after adopting the recommendations, and failing to obtain the promised advantage, seldom consult the surgeon a second time, either for this or any other ailment. The practitioner thus deceives himself, and believes that he has succeeded in curing his patient. Not long since, a gentleman engaged in extensive consulting practice in the city, informed me that he cured all his cases of spermatorrhœa with sesquichloride of iron. Having at the moment when this conversation occurred, several of this gentleman's patients under my care, I naturally made some inquiry of them, and in reply was given to understand the reason they told Mr. ———, "that they were quite recovered," was to avoid taking any more medicine, which experience had proved to be useless and inert.

I consider this a subject of great importance, for it proves the necessity of bestowing upon it the attention which it requires. If the regular practitioner could be induced to give to this matter its due consideration, I am satisfied that numbers suffering from these affections, would be prevented consulting advertising, ignorant, and incompetent persons, in the hope of obtaining that assistance and relief which they failed to obtain from a legitimate source. Patients have a great objection to apprise their family surgeon, that notwithstanding all the kindness and attention exerted in their behalf, they are still left impotent; an objection which operates still more forcibly, if, as is frequently the case, they are in the habit of meeting in society.

We have seen that a disease, not only capable of simulating, but which does upon occasion simulate almost every other affection* depends upon a peculiar morbid derangement of the genito-urinary system. True, we find some instances, which are attributable to a naturally bad constitution, and hence are purely the result of the infirmities of nature. Others may arise

* "On the other hand," says Lallemand, "the effects of seminal losses are also very varied; there is hardly a malady which these symptoms may not simulate: if they often surprise the practitioner, they alone, however, can put him upon the discovery of diurnal pollutions, almost always unknown to the patient."—*Des pertes Seminales*, tome iii. p. 529.

from severe study and sedentary occupation, as shown in the history of the following:—

CASE.—A gentleman called upon me in 1846, with a view to my professional assistance under the following circumstances. He stated that he had but recently left the university, but that for a considerable time before he left, he had read regularly eight or ten hours a day, without being sensible of any very great inconvenience. Confinement, however, and sitting so long in one position, ultimately brought on nocturnal emissions, which went on increasing, till at length he was troubled sometimes twice, sometimes thrice, in the course of the night. On the day following he was invariably stupid and lethargic, with a dull pain in the top of the head, which mostly continued throughout the day, subsiding towards the approach of evening, and leaving him free till after another attack of the emissions.

At the first, these emissions did not recur more than once a week, or every ten days. Each attack, however, increased the severity of the head-ache, and he was longer in recovering from its effects. At the same time, his digestion became bad, his eyes weak, and the bowels very much constipated.

He applied to many of the profession, and to a physician. This gentleman prescribed for him, and stated that all his miserable feelings would cease as soon as the anxiety occasioned by his approaching examination ceased. After his return home from college, finding he did not recover so soon as he expected, and the skill of his family medical attendant having equally failed, he was induced by the promises set forth in the newspapers to apply to some charlatans, carrying on their trade in London. The acids which these persons almost invariably give to their dupes, greatly aggravated the already deranged state of his stomach. He paid them a very large sum, and, as is their plan, in advance, upon the promise, on their part, of a certain and speedy cure. The vexation, however, from disappointments in the expectations raised, together with the irritation occasioned by their threats of exposure, because he sternly resisted all their further attempts at plunder, greatly increased the nervous trepidations, from which he was suffering so severely. At the

time he became my patient, I had great reason to fear that the mental excitement might prove very unmanageable. The pain in the head was excruciating, the palpitations of the heart might have been readily mistaken, by persons unaccustomed to such nervous sympathies, for organic disease of the organ. He also suffered very severely from spinal irritation, which occasioned great unsteadiness of gait. His melancholy and despondency were extreme. All these symptoms were greatly aggravated by the nocturnal emissions, which now, unfortunately, had become much more frequent. I remember calling upon this patient one morning: I found him trembling and shivering, as if suffering in the cold stage of an ague. He attributed these tremblings to two emissions which had taken place during the night. He had all the symptoms of incipient amaurosis, which caused a great degree of despondency, for he had been told by his regular medical attendants, that this might probably terminate in complete blindness. The state of the urine, the stains upon the linen, the seminal discharges at stool, and the weeping from the urethra, gave ample proof that my patient was suffering from *spermatorrhœa* in a very aggravated degree.

The cautery was applied to the urethra, and the cauterizations were each attended with marked benefit. He was then treated actively for the threatened amaurosis, and fortunately the eyesight was soon restored. Mineral and vegetable tonics were then prescribed, to invigorate the frame, and they completed the cure which the cauterizations had begun. I have seen this gentleman repeatedly since, and I am happy to say that he is quite well, and in the uninterrupted enjoyment of excellent health.

CASE.—In consequence of the high eulogiums passed upon me by the author of a small pamphlet, entitled “An Exposure, &c.,” and whose case I have just detailed, I have been consulted, since its first appearance, by a great number of patients, many of whom had been previously under hospital and other surgeons of the highest repute practising in the metropolis. Many of these patients came up to London from the country, where they had availed themselves of the very best advice which the pro-

vinces could afford. Most of these patients were suffering from *spermatorrhœa*. These gentlemen almost invariably represented to me, that very much to their annoyance, "their disease was pronounced as merely imaginary, that there was no real foundation;" an assurance being given, "that all would be soon right, if they indulged in sexual intercourse." But the disease continuing to advance, the symptoms becoming more severe, and secondary affections of an alarming nature setting in, they were then treated for disease of the heart, lungs, spine or kidneys.

Notwithstanding the discharge from the urethra had been repeatedly forced upon the attention,—notwithstanding the energy and confidence with which the hope was urged, that if the discharge could be suppressed, recovery would speedily follow. What was the result? All in vain! The ideas of the patient were looked upon as chimerical, and his reasonings and hopes treated as the wild and visionary creations of the hypochondriac! Such has been the plan of treating the miserable victims of this disease; and such must continue to be the mode, so long as false delicacy and mawkish prudery prevail; and that certain of their votaries are allowed to *curb* the *energies* and *stifle* the *researches* of the profession. So long as these tolerations endure, so long will these unfortunates be left to their miserable fate. But there is every reason to hope that the time approaches, when the mind, emancipated and freed from the thralldom of corrupt and selfish journalism, will apply itself fearlessly to the study of a class of diseases which, though so serious in their consequences, may be said at present to be scarcely known, much less understood. Perhaps it would be impossible to illustrate the principles better than by detailing the history of the following case:—

CASE.—A gentleman, a member of one of the learned professions, consulted me about eight months since. He informed me that he was the son of a very eminent surgeon practising in London, and that he had been an invalid for many years. His disease commenced with a frequent desire to pass the urine, the last drops of which he generally found mixed with a thick slimy substance. He soon found that the desire for sexual indulgence

had greatly diminished; faintness occasionally followed the evacuation of the bowels, especially if the evacuation were hard or costive, and forced away by much straining. These symptoms were accompanied with a desire of being quite secluded and alone; he became timid, indolent, irresolute, inactive, negligent in his dress and appearance. He complained of suffering from a peculiar "opening" pain in the top of the head, and this pain was greatly increased after an involuntary emission, which had been frequent of late. There was a feeling of great weakness in the back, and indeed most of the other leading symptoms of *spermatorrhœa*.

He was under the professional care of his father for some months, but without receiving any degree of benefit. He enumerated many of the most eminent surgeons in London, whom his father had consulted about his case; but the result was the same, he benefited nothing. He continued going on in this manner for three years; but the disease continuing to increase, and his health becoming seriously impaired, he was recommended to travel.

After an absence of eighteen months, he returned home to London, with his general health greatly improved. But the emissions at night, and the seminal discharges at stool, continued with as much violence as formerly. He had assured me that he had repeatedly called the attention of his medical advisers to those nocturnal emissions, and also the discharges when at stool, and the weakness and exhaustion which followed. His representations caused only a smile—the smile of incredulity—followed by a hint, that he was "nervous," and over-sensitive, and that if not very careful, "he would become *hypochondriacal*;" for the prevention of which he was recommended *marriage*! This advice he followed, and in consequence became a great deal worse. All the symptoms became aggravated, and a number of new ones set in.

He suffered from a hard, dry, hacking cough, which induced the belief that he was consumptive. He could not rest at night, from an uncontrollable apprehension of *sudden death*. Under these circumstances, he called upon me, and I must confess, I hardly ever saw a more deplorable-looking patient.

I found both testicles greatly reduced in size ; the left very nearly wholly absorbed ; veins of the scrotum large, distended, and varicose-looking ; incessant desire to pass urine, which came dribbling away, so that the drops fell at his feet ; eyes dull, heavy, and watery-looking, appearing as if he had been weeping ; the urine, on examination, was found abounding, indeed loaded with, spermatozoa.

I commenced the treatment of this case by cauterizing the urethra, which was done three times. Marked benefit followed each application. Galvanism was applied along the spine, to give tone and energy to the spinal chord, or cerebro-spinal axis. The dry cupping-glasses were also frequently applied, upon the principles set forth by Celsus. This treatment was followed by very marked relief, an evidence of which will be found in the following extract from one of his letters:—"I sleep well, and my sleep is refreshing. My appetite is good ; and I digest my food well. All my nervous symptoms have almost entirely disappeared. I can read four or five hours a-day, and can remember well what I have read. This I think a good sign, as no doubt you will recollect, that before your treatment, if I attempted to study even for half-an-hour, it was certain to bring back the pain in my head, so as to force me to leave off ; and my memory was so bad, that I could not call to mind a single particular of the subject upon which I had been reading. Since the application of the the cautery, I can retain my water for a proper time, and that without feeling any very urgent inconvenience. The inclination as well as the power for sexual indulgence have returned. We are daily receiving the congratulations of our friends, upon the improvement in my health, and the extraordinary change for the better in my appearance. I now feel cheerful, and can enjoy society.

"For the first time, I yesterday mentioned to my father that I was wholly indebted to you for my recovery ; but, as I expected, he only ridiculed the idea, denouncing it '*downright nonsense*,' which strongly reminded me of the proverb about the *prophet*."

OBSERVATIONS.—I think this case will fully bear out the principles which preface its details. Here a surgeon—a man, too,

justly eminent for his professional knowledge—sees his own son gradually sinking, the victim of a dreadful disease, and yet his suspicions are never once excited as to the real cause. Nay, such the infatuation, that an honest and disinterested acknowledgment and avowal of the truth, meet only the reproof of stern and obstinate incredulity. If the profession would give this but one half the attention bestowed upon other maladies, much good would result, and a great amount of suffering would be relieved; and the charlatans, who prey upon the miseries and fears of the unfortunate victims, would find their trade neither so prosperous nor so profitable. What is the unfortunate sufferer from spermatorrhœa to do? where is he to seek for either consolation or relief? The bulk of the profession treat him with either derision or irony, or perhaps both. What resource is then left him, but to seek, out of the pale of the profession, that consideration and expectation of relief which its legitimate members deny. If the regular practitioner would but become acquainted with the nature and symptoms of spermatorrhœa,—if the principles of treatment laid down in these pages were more generally adopted, instead of invariably decrying its service or utility,—one of the most fertile and seductive incentives to charlatanism would be most effectually paralyzed—nay, even annihilated. In one of the volumes of the *Medical and Physical Journal* will be found the following case, which occurred at St. George's Hospital, and was recorded by Sir Benjamin Brodie:—

“This patient was admitted into St. George's Hospital, on account of pain in the left testicle. The organ was soft, flaccid, and about a third of the size of the opposite one. The patient had not received any injury, nor had he had gonorrhœa; but for five years had practised masturbation once a day. The testicle, before it was wasted, was the seat of very severe pain and swelling; the patient was sad and melancholy. Various remedies were tried in vain, and he left the hospital without relief.”

Now, when we reflect upon the history of this case, and compare its symptoms, there can be very little difficulty in coming to the conclusion that this patient was the victim of

inveterate spermatorrhœa. I am satisfied, from the experience I have had in the treatment of numerous cases of a precisely similar character, that *cauterization* of the *urethra*, followed up by the treatment previously detailed, would have been attended with very different results, and the success would have been the same in this instance as in those which have occurred to myself.

When spermatorrhœa arises from, or is accompanied by general debility, we must not rest satisfied with merely arresting the nocturnal and diurnal pollutions; we must in addition, stimulate the muscles, the erector penis, *acceleratores urinæ*, cremaster, &c., and endeavour to arouse them, and all the other parts immediately connected with the genito-urinary apparatus, from their state of lethargy, before the patient can attain sufficient tone and power. In such cases as already stated, I have found the greatest benefit;—indeed, after the application of the cautery, the very best effects,—from galvanism, with the internal use of ergot of rye, camphor, cold douche, aromatic baths, and friction of the spine. I have found a great deal of benefit from the application of iodine to the prostate, and to the mucous membrane lining the urethra, for in such instances the membrane is always more or less corrugated, in consequence of the seminal fluid so constantly escaping, in cases like that just detailed, where there is a general atony in the system and relaxation of the ducts. The application of galvanism, with a little management, may be readily effected. The plan I adopt is to have the end of the stilette of a flexible catheter to protrude at both extremities. At the extremity which enters the urethra, the stilette is formed into a sort of cone, the apex of which, when in use, is in the direction of the bladder. At the base it is made so large that the stilette cannot be withdrawn through the canula, resembling in some degree, the similar extremity of the *post-caustique*. Having introduced the instrument till the conical extremity has arrived at the part of the urethra to be subjected to the galvanic influence, the other end of the stilette (which is metallic of course, and a conductor) is connected by means of a copper wire with the battery. We may thus subject any part of the urethra, as the prostatic portion, where the ducts open, or the

neck of the bladder with its sphincter, to the influence of the galvanic current. By a similar arrangement with a rectum bougie, the muscles about the anus and rectum, may in like manner be brought under the influence of the galvanic fluid. I have in many instances found the greatest benefit from this mode of treating affections, such as those under consideration. I have succeeded by these means in curing or otherwise relieving several very bad cases, which had been for years taking all sorts of medicine under the direction of the most eminent and distinguished practitioners.

I have been repeatedly consulted by numerous persons who, before marriage, have felt the usual desires for sexual intercourse, yet on being married, felt quite unequal to its consummation. These consequences in most of the instances, arose from over anxiety and timidity, and required merely a little reassurance to restore the natural power. Indeed, many, the novelty and excitement having worn off, recovered spontaneously. However, it not unfrequently happens that we are called upon by persons complaining, that though they have been married for years, they have continued incapable of sexual connexion; and in most of these instances, the persons have been advanced in life, the age varying from thirty to fifty. By far the greater part of them had led a life of the strictest celibacy; diurnal pollutions having been produced in early life, the discharge diminished, or altogether abolished the desire for the sexual congress. Such persons found no difficulty in waiting till a favourable opportunity presented, and enabled them to form, what they named a "judicious and advantageous alliance," seemingly forgetting that nature intended every part of the human body should be properly exercised; and that this law cannot be infringed without incurring the penalty. The muscles, especially the *erectores penis*, under such circumstances, are found weak and debilitated. The testicles loose, flabby, and pendulous. The erectile power much impaired; and the desire for sexual indulgence greatly diminished. These cases prove very tedious, and require much time and patience before the patient can be perfectly restored.

Venereal affections, it has been shown, are often intimately

associated with spermatorrhœa; and this latter may trace its origin at one time to the effects of the virus upon the system, at another to the injudicious use of the remedies administered for its cure. In either case, the system is suffering from the effects of a poison, and will require the utmost skill and attention upon the part of the practitioner, for its total and complete eradication.

We have also found that various cutaneous affections become intimately associated with spermatorrhœa; and that sulphureous and other medicated baths become necessary adjuncts to the other means of cure.

Particular conditions of the nervous system seem at times very intimately connected with, and even very much influence and modify the phenomena of spermatorrhœa. Such require the exhibition of opium, camphor, hyoscyamus, &c., and other sedatives, in order to give the proper efficacy to our other means.

With respect to the digestive functions, we almost always find them more or less deeply implicated. This has been remarked even by the father of medicine, who shows that although the appetite may remain, yet these patients waste—"ἐσθίειν ἀγαθοί, καὶ τηχόνται." Nor is it the functions only, but even the structure of the organs themselves often becomes involved. Thus not only does the food become vitiated in its qualities, but in fact leads to changes in the organic system, which prove greatly embarrassing. The attention of the practitioner should be directed to these points. Thus piles, worms, constipation, or acrid diarrhœa, may all concur in aggravating the disease; and each and all of these will require their appropriate modifications of the treatment.

I have found epilepsy so often complicated with spermatorrhœa, that I am inclined to believe that epileptic fits, in a very great proportion of instances, are mainly dependent upon spermatorrhœa for their existence. I have seen several instances of epileptic patients who have consulted me, and whom I have found suffering from spermatorrhœa. It is singular that in a large proportion of these instances on cauterizing the prostatic portion of the urethra, the epilepsy has gradually abated

in severity, and ultimately entirely disappeared. I am not, however, prepared to say how far the spermatorrhœa in these cases has been the cause of the epilepsy; but I think the benefit derived from cauterization very fully warrants the conclusion that they are in some degree related as cause and effect. I made it my business to ascertain the condition of the genital system in a number of cases considered as ordinary epilepsy; and in a number of these I have found the urine tolerably well loaded with spermatozoons. I therefore throw out these hints, rather to stimulate inquiry, than as observations leading at present, at least, to any decided results.

Gonorrhœa and masturbation, it is true, are most frequently found the causes of spermatorrhœa; still it must not be forgotten that it may be caused also by affections of the skin, irritation of the rectum, or of the cerebellum, obstinate constipation, phymosis, stricture, and the abuse of astringents, cantharides, &c. The affections which are secondary, or caused by spermatorrhœa, must receive due care and attention. Such are hydrocele, varicocele, atrophy, or wasting of the testicle, affections of the eye, of the brain, lungs, stomach, kidneys, bladder, &c.

Before determining the mode of treating spermatorrhœa, the urine should be carefully analysed in the manner already described; for by this proceeding we are enabled not only to detect the existence of spermatorrhœa, but also to discover the condition of the prostate, urethra, kidneys, bladder, &c.

I have been consulted by a great number of persons living at a considerable distance from town, in consequence of suffering from some one or more of the disorders above noticed. Indeed scarcely a post passes without bringing letters requesting advice under those circumstances. I regret, however, that I am not in a position clearly to state my success in their treatment. Such persons mostly write under assumed names, giving as their address, "the post office till called for,"

Mystery of this kind arises from apprehensions on the part of patients, that their cases form subjects of conversation to the practitioner, and that as little ceremony would be observed in divulging the secrets, and betraying the name and circumstances

of the patient, as in recording the general history and symptoms of the disease. It may be as well, therefore, to apprise persons influenced by such apprehensions, that the confidential communications between a patient and his professional adviser, are always held sacred and inviolable, by every respectable practitioner. Threats and even absolute exposure of the infirmities of nature, belong to, and are practised only by the unprincipled, who, conscious of having no claim to honourable remuneration, subsist entirely by deception and extortion. With the respectable practitioner, the feelings of either the patient or his friends incur no risk whatever of outrage. Were the knowledge of these facts more generally disseminated, I should have been able to state more at length the efficacy of medical treatment in these affections. There is not a case in this volume, the history of which would enable any, except the patient himself, and the practitioner whom he may have introduced to me in consultation, to recognize the individual object of the clinical history.

When the seminal ducts are in a relaxed and patulous state, allowing the escape of the seminal fluid with the last drops of the urine, and on the patient going to stool, and when the pollutions are both nocturnal and diurnal, temporary relief, and a momentary abatement of the symptoms may result from the administration of sedatives of steel, quina, cold bathing, alteratives, sarsaparilla, &c. But a speedy relapse soon shows that the benefit has been only transient. Now I believe that in such a condition nothing will answer, not to say answer so well, as the cauterization of the urethra. There is an atony about the prostatic portion, which extends itself to other parts of the genital system, that nothing relieves so effectually as the cautery. The nature and mode of performing this operation have been already explained. It cannot be too thoroughly impressed upon the mind, that to prove successful, the cautery must be applied to the *prostatic* portion of the urethra, where the *ducts open*. It is the bracing influence upon these, extending to the other parts, that renders cauterization so pre-eminently effectual and serviceable. It has frequently occurred to me to witness, not only the total failure of this operation, but also a considerable aggravation of the disease, in consequence of incompetent

persons attempting an operation, the nature and mode of action of which they did not understand.

Indeed this morning I received a letter from Mr. Williams, a very intelligent surgeon practising at Llanrwst, North Wales, upon this subject, which I cannot better illustrate than by publishing his letter :—

“ A young man from this town will call upon you in the course of a day or two. He has been suffering for two or three years from extreme mental depression, aversion to society, &c., which he could not attribute to any cause, until he read your valuable essay on spermatorrhœa. He has consulted me since, and confessed that he had indulged in the baneful habit of masturbation to a very great extent. He is now suffering much from nocturnal pollutions, but unattended with any degree of pleasure. I find that his case is so exactly similar to those described in your work, that I have recommended him to come to town to consult you personally. As the distance from here to London is so great, after you have applied the cautery you will oblige me by letting me have a few lines containing full directions respecting his future treatment. Before I saw the patient he had had *an armed bougie passed up the urethra*, but was only introduced TWO OR THREE INCHES, which produced *much distress and no relief*.”

But I do not wish to be understood as holding forth cauterization as an exclusive means of cure. Like every other remedial agent, it will require the assistance of the many powerful auxiliaries we possess. I have, in my own practice, found great and surprising benefit from the application of the cautery, but yet the cure has not been perfected without resort to the auxiliary means, the effects of which have been so ably explained by Lallemand. While a pupil of this eminent professor, I witnessed the beneficial effects “ *du galvanisme, phosphore, siegle ergoté, bains froids, bains de mer, bains aromatique* ;” and although I freely accord to them their utility as auxiliaries—even powerful and essential ones—still I must declare that my own experience, by no means a limited one, has satisfied me that *cauterization* forms the grand and essential means of cure, when the seminal ducts are relaxed and patulous.

When impotency depends upon an indurated condition of the epididymis, we must at once commence with the bichloride, for, as previously stated, all other remedial agents will be useless, until we have removed the hard and nodulated state of this part. For this hardened condition, in consequence of the obstruction which it offers, prevents the seminal fluid from passing onwards to the epididymis, where, after being secreted, it is destined to be lodged, till pressed forward through the seminal ducts into the urethra during the sexual congress.

Nothing can demonstrate the absurdity of the idea of a universal remedy for the cure of disease more clearly, than the treatment of spermatorrhœa and impotency; for we find that some patients are cured by tonics alone, others by anti-spasmodics and alteratives, many by stimulating and aloetic injections to remove ascarides from the rectum, and thus relieve the irritation which their presence causes. Galvanism, as already noticed, proves a useful adjunct. Lallemand observes, that antiphlogistics and tonics, emollients and excitants, repose and fatigue, produce good and bad effects in the same patient, in proportion as irritation or weakness predominates. Therefore, our first object should be an *inquiry* into, and a *thorough knowledge* of the nature of the *causes* which produced the loss of the seminal fluid when the patient goes to stool, or passes urine. This knowledge will prove of the greatest importance in conducting the treatment, which must be modified to suit the particular circumstances of each case. The exciting causes are frequently very different, and indeed, often so diametrically opposite, that remedies useful in one instance, would prove highly injurious in another. For example, were we to treat a case of impotency depending upon stricture, in the same way as when it arises from induration of the epididymis, from phymosis, or masturbation; we should fail of success, as each requires its own peculiar mode of treatment.

PART II.

ON STRICTURE OF THE URETHRA.

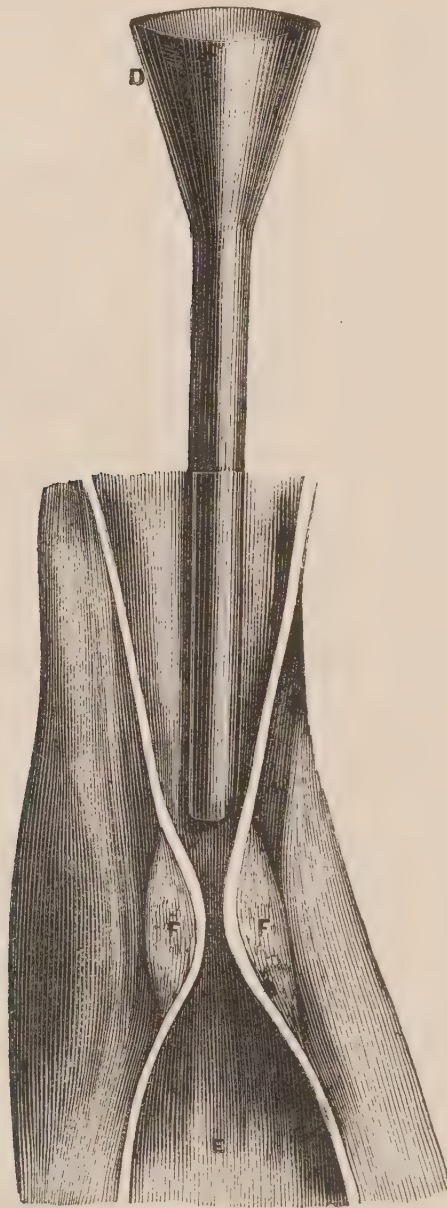
VARIOUS symptoms have been enumerated by different authors as infallible proofs, when present, of the existence of stricture. Such are, for instance, a diminution in the stream of urine; a forked, spiral, or cork-screwed appearance of the same; the bladder unusually slow in emptying itself; and this completed only by a dribbling, or slow dropping, for some time after the cessation of the stream. Should some one or more of these symptoms be permanently present, we may be assured of the presence of stricture.

Others again maintain, that all the above may be present, and yet the urethra may be perfectly free from all traces of organic disease; and that the existence of it can be determined with certainty only by introducing a wax bougie, elastic, and sufficiently soft to allow of an accurate adaptation to the urethral canal, and of a perfect impression of the strictured part. But such persons appear to me to forget, that when irritation of either the bladder or canal exists, the introduction of a bougie will be attended with such spasmodic contraction of the latter, as will produce marks and impressions upon a soft bougie in every respect similar to those caused by a true stricture.

The opportunities afforded by the dissecting-room must satisfy all who have availed themselves of them, that numbers who were supposed to be suffering from stricture, and during life treated accordingly; on examination, their urethra after death presented no evidence whatever of the previous existence of stricture. When engaged as a demonstrator of anatomy, numberless oppor-

tunities were presented to me of examining subjects brought from the hospital to the dissecting-rooms, who during life were believed to be labouring under stricture; but which opinion, upon anatomical examination, proved to be erroneous. Every

PLATE V.

*Explanation of the Plate.*

This plate is intended to show a stricture of the urethra with the point of the exploring canula resting upon the stricture.

surgeon of experience and opportunity will, I am sure, confirm the truth of these remarks, and that numerous instances of a similar description have presented to himself.

If such be the case, is it not then of the greatest importance and the deepest interest, to determine whether any more certain means of ascertaining the presence of stricture exist, than mere symptoms and impressions upon instruments? This involves matter essential not only for the surgeon's reputation, but even the patient's own peace of mind. A reliance solely upon symptoms, and the impressions made upon instruments, have too often doomed the unfortunate patient to months of anxiety, and the inconvenience and suffering caused by the repeated introduction of instruments for the cure of a disease which never existed.

Fortunately, we may now congratulate ourselves upon the attainment of an object, so long a great desideratum with the profession, namely, an instrument for the ocular examination of the urethra; and which enables us by actual inspection to satisfy ourselves of the real state, whether healthy or diseased, of this passage. To the ingenuity of Mr. Avery we are indebted for this most valuable discovery; and all must admit that it promises to prove one of the greatest modern benefits conferred upon practical surgery. With this instrument, with the aid of additions and improvements that have been more recently effected, we are enabled not only to determine with certainty whether stricture really exist or not, but also clearly to see the sort of constriction; the size of any opening, should such exist, or whether any false passages have been made, as may be readily understood by a reference to Plates V. and VI.

We can likewise ascertain whether chancre exist in the mucous lining of the canal; or if a closure of the passage depend upon *fungous* growths, a matter of the utmost moment, as in each of

D. The funnel-shaped end of the canula, for collecting and transmitting the rays reflected from the speculum.

B. The glans penis.

E. The urethra laid open.

F F. Deposit of fibro-albumen, as copied from Stafford. This shows that the accumulation of fibro-albumen, the result of inflammation, blocks up the canal and causes stricture.

these different circumstances a different mode of treatment becomes necessary. Besides the facilities afforded, in cases of retention of urine, depending upon a closure of the passage, of discovering the particular part where the least resistance will be offered, and thus difficulties, hitherto unsurmountable, are easily overcome. By means of this instrument, we perceive the exact spot where to apply the point of the catheter, so as to pass it into the bladder, and empty it before it bursts, while at the same time we learn how to avoid that rambling, poking about, by which false passages have been so often made.

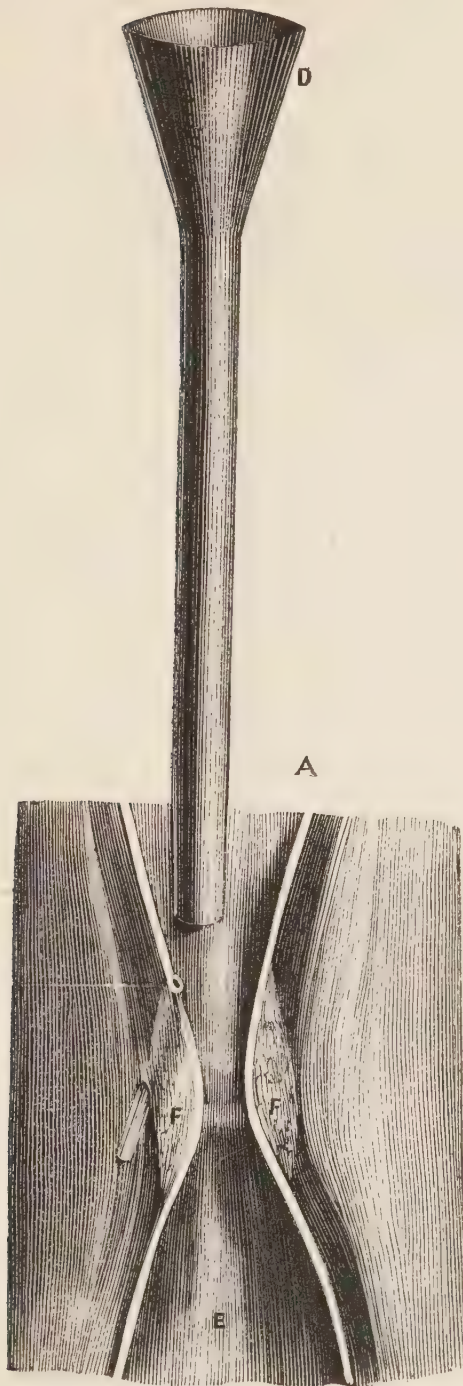
The forms of organic stricture are various, and their appearances, as seen by the *urethral explorer*, are shown in Plates V. VI. and VII. Since I have been using the explorer for examining the urethra, I have been enabled to decide whether the stricture be organic or spasmodic.

This point being determined, I next procure a sample of the urine for analysis, which I analyze, and if I discover any of the salts capable of irritating the mucous lining of the urethra, in excess, I at once endeavour to neutralize their effects, and so remove the cause of irritation. I then prescribe one or two warm baths; and inject compound tincture of camphor, and tincture of hyoscyamus into the rectum, which allays irritation, and allows the easy introduction of an exploring tube or canula into the urethra. This is pushed till its extremity rests against the stricture, so that its exact situation and extent are thus fully brought into view.

Should the stricture prove to be merely spasmodic, the causes of irritation being removed, and the irritation itself allayed by camphor and hyoscyamus, it is seldom necessary to prescribe anything further; for the urine will now flow in a full stream, and the patient be cured. I have now used the explorer in a great number of cases, and every day's experience more fully convinces me of its great practical utility.

THE ILLUMINATED URETHRAL EXPLORER.—This instrument, of which a diagram or drawing is given in the front of the book, consists of a concave mirror or speculum, having its concave surface *silvered* and highly *polished*. The speculum is

PLATE VI.



Explanation of the Plate.

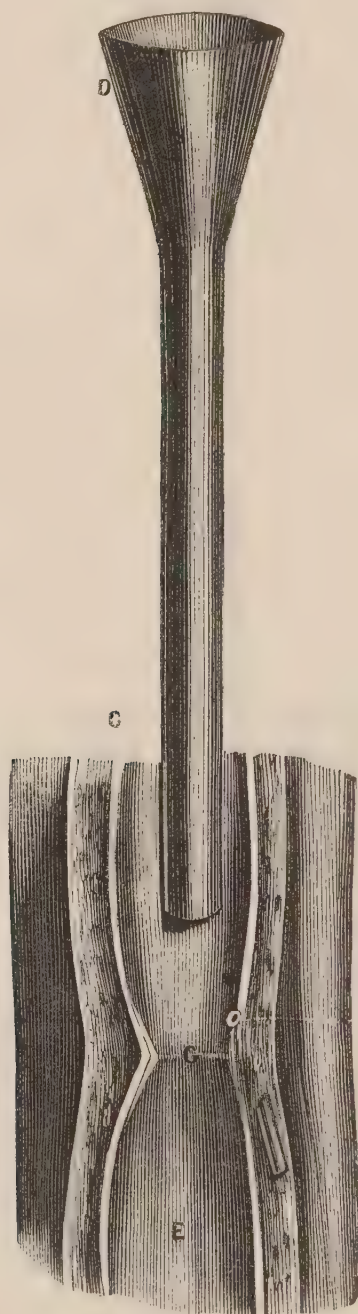
This Plate shows a stricture, and also a false passage.

F F. Fibro-albuminous thickening E. Urethra laid open.

D. Canula, its small end directed to a false passage on the left side of the urethra.

mounted upon a stand, by which it can be held in the hand of the explorer, and so easily adjusted to his purpose. Con-

PLATE VII.



Explanation of the Plate.

Showing the bridled stricture, C, with the false passage on the right side. The letters require no explanation.

nected with the speculum is a stand to hold a candle, and so placed with respect to the mirror, that the rays of light from the candle when burning shall fall upon the *concave reflecting* surface of the speculum, and be by it reflected. A bright silver canula, one extremity of which is dilated into a large funnel-shaped mouth, D, Plate VII., while the slender canular portion, G, is of the calibre suited to its introduction into the urethra. This funnel-shaped canula is highly polished on both its external and internal surfaces. There are several of these varying in size, some of them having elliptical pieces cut out, so as to leave lateral openings.

To use the apparatus the exploring canula is introduced into the urethra till its open small extremity touches the stricture or other cause of obstruction. The explorer, holding his reflector, with the candle alight, in his right hand, brings it into and retains it in such a position as to throw the strongest light into the funnel, and pass it along the interior to the small extremity of the canula. In the centre of the speculum there is a small aperture, to which if the *eye* of the explorer be so placed as to enable him to look from the funnel end along the length of the canula, he will see the urethra, or stricture, should there be one, beautifully illuminated at the small extremity of the exploring canula. By this contrivance the form, figure, and other conditions are rendered perfectly manifest, and may be thus readily and clearly determined. When the object is to ascertain the condition of any lateral portion of the urethral canal, I make use of one of the canulas having an opening in the side. This I introduce into the urethra so that the lateral aperture shall be in relation, or correspond with, that part of the passage to be examined. The rays of light from the reflector traversing the canula, and falling in all directions upon every point of the polished interior, are ultimately reflected and thrown upon that part of the urethra opposed to the opening in the tube, and in sufficient quantity to illuminate it perfectly. In this way ulceration, abrasion, or any other unnatural condition—inflammation even, or congestion—may be seen and distinctly recognized. The investigation may be carried to every portion of the urethra, whether the bulbous, membranous, or prostatic, if permeable,

by means of this apparatus, and its condition distinctly ascertained.

Since I adopted the use of this means of illuminated exploration, I have been enabled to satisfy myself that many persons applying to me under the impression that they were suffering, from stricture—an impression established and confirmed by the symptoms and ordinary methods of investigating the disease, were really not so affected at all; and that the introduction of bougies, like the remedies of the robbers in the cave to cure Gil Blas of his colic,—were but gradually inducing an evil which would otherwise have had no real existence.

I have now been in the habit of examining the state of the urethra for some time by means of this instrument; and I have found it of such essential service, in ascertaining precisely and distinctly the morbid or healthy condition of the passage and its mucous lining, that I felt it incumbent to describe both itself and its use, and to pronounce upon its value in “urethral” diagnosis. Nor is its use confined to urethral explorations alone; it can be applied with equal ease and advantage in examining the state of the throat or fauces, larynx and parts adjacent, as well as of the vagina, os uteri, &c. The rectum also may be subjected to a similar method of diagnosis; and in the two latter cases evidently with great advantage as compared with that in ordinary use. The only thing necessary will be the substitution of larger or wider funnel-ended canulas.

If instruments, as bougies, &c., be resorted to when nothing but spasmodic stricture exists, the irritation and excitement caused by the introduction of a foreign body into the urethra, not only causes spasmodic action, but speedily excites inflammation of the irritable mucous lining. The inflamed vessels pour out coagulable lymph as represented in the Plates V. and VI., and thus a spasmodic may be converted into an organic stricture by the very means instituted for its cure. There cannot be a doubt that numbers of organic strictures have been produced in this manner.

If stricture be the result of inflammatory action, whether induced by the introduction of bougies, or by gonorrhœa, the canal of the urethra, if examined by the explorer, will be found

to be nearly closed from thickening of the mucous lining. The swelling and obstruction, as previously observed, are occasioned by the pouring out of albuminous fluid, or lymph, which may become organized. It may also become dry, hard, and gristly like cartilage. When this occurs, any attempt to widen the passage, by the introduction of bougies, or to cure the stricture by dilatation, as it is termed, of the urethra, only aggravates the disease. The stilette, recommended by Stafford, is best adapted to such cases, for we must perforate and divide the stricture by the stilette. I have seen several instances of strictures of this description treated for years by the ordinary modes of dilatation without the slightest benefit. On the contrary, the stream of urine became more and more reduced, and the general symptoms, month after month, more and more distressing. Yet these cases were relieved in a few days, by division of the stricture, an application or two of the stilette, being all that was required to complete the cure.

I by no means assert that every description of stricture so treated, would terminate in this favourable way. On the contrary, I am satisfied that, if a fungous growth cause the stricture, that so far from being benefited, it would be rendered much more unmanageable—at least such is the result of my observation. When stricture arises from this cause, an application or two of the nitrate of silver is the best mode of treatment that can be adopted; and in the majority of cases very little else will be required.

The strictures to which the stilette is more especially applicable, are those formed by hard cartilaginous substances, which dilatation of the urethra does not cause to be absorbed; and hence an additional reason for becoming at once acquainted with the nature and qualities of the obstruction.

If the stricture be caused by chancre, or any specific inflammation, a very different mode of treatment should be adopted. A remarkable case of this description occurred when I was a pupil at the Lock Hospital.

CASE.—A student inoculated himself by introducing some of the syphilitic virus into his own urethra. He was one of those

who maintained that the mucous membrane of the urethra could not be inoculated by the matter of chancre. He discovered, however, by sad experience, that this was erroneous. He suffered severely not only from a retention of urine, excited by the indurated chancre, but also from a very bad attack of secondary symptoms. The attempt to introduce a catheter, in this case, to empty the bladder, was followed by alarming consequences. Each attempt caused rigors and severe shivering, similar to the cold stage of ague. The symptoms, however, soon abated on the gums becoming tender; and in less than a week after the system came under the influence of the iodide of mercury, this patient could pass his urine as freely as ever he did in his life.

If the stricture depends, as frequently happens, with men far advanced in life, upon an enlargement of the *prostate* gland, the modes of treatment just considered are wholly inadmissible, as they all greatly aggravate the disease they profess to cure. I am satisfied, I have seen more than one case of this description, in which attempts at dilatation of the urethra brought on inflammation, suppuration, and bloody urine. To which succeeded rigors, followed by a general breaking up of the system, and premature death.

In these cases I find the application of the ointment of the iodide of potassium to the perineum, hyoscyamus, warm baths, and the mineral acids most suitable. The hyoscyamus relieves the nervous irritation, and the iodide frequently reduces the size of the prostate by promoting absorption, and it thus effects the opening of the urinary canal. Buchu and the mineral acids, by their astringent influence upon the mucous membrane of the bladder, increases its tone, and enables it to retain the urine a much longer period, without inconvenience, and thus renders the patient's existence much more tolerable.

SPASMODIC STRICTURE.—Stricture of this sort arises from violent spasmodic action of the muscles embracing the meatus urinarius, obliterating its calibre, so that the passage of the urine along the canal is for a time completely prevented. The attack is mostly sudden, without any warning; the patient is seized with an immediate and urgent desire to empty the bladder,

but is unable to pass a single drop, notwithstanding the urgency of an over-distended bladder. It occurs from severe irritation of the mucous lining of the urethra, mostly the consequence of violent gonorrhœal inflammation. Although, where there is a tendency to this form of stricture, the urine is frequently passed with a sense of itching or smarting, still there is no difficulty nor any sensible diminution in the stream. The following case, perhaps, will illustrate the subject:—

CASE.—A gentleman of sanguineous temperament, who had suffered upon several occasions from gonorrhœa, during one of them was compelled to set out upon a long journey. The irritation in the bladder and urethra were very great, and he was forced to make water every time the coach stopped. Passing water produced the usual pain and scalding; still the urine was passed without difficulty. He commenced the journey at night, and for the convenience of micturition, rode outside. In the morning he felt a sudden and most urgent desire to pass water, but as the coach was descending a steep hill, the coachman could not pull up, and he was obliged to control the desire till the vehicle reached the bottom.

On stopping, he attempted to pass water; but although he felt the strongest desire he could not pass a drop. A sort of spasmodic involuntary straining at last brought away five or six drops, after which not another drop could he pass. The desire, however, still continued, and several attempts during the remainder of the journey to empty the bladder proved equally abortive. Under the above circumstances, he arrived in London, and was conveyed to his own residence suffering most intensely, but unable to pass a drop of his urine.

I visited him a short time after, and found a professional gentleman endeavouring to pass a bougie into the bladder; but neither this, nor a catheter, which had been tried in the first instance, could be introduced: indeed they could not be passed more than a third of the length of the urethra. Under these circumstances I suggested a powerful opiate, and the warm bath. In consequence, a draught containing two grains of *acetate of morphia* was immediately given, and the patient put into a warm

hip bath. He had been scarcely ten minutes in the bath before he passed water freely, the water being passed in the bath. The bowels were next attended to, and the urine continued to pass free and easy for a day or two, when, without any assignable cause, the obstruction returned, but gave way to the same treatment.

It was now ascertained that the gonorrhœal discharge had ceased, when measures to restore the discharge were taken. Notwithstanding the re-appearance of the discharge, he had one or two more attacks; but by diluents, opium, and warm poultices and fomentations to the penis, the attacks gradually disappeared, and all difficulty and pain in passing ultimately ceased.

This was evidently a case, in which spasmodic action of the muscles closed the urethra, and rendered it impervious. It may therefore be fairly questioned, whether the attempt to introduce a catheter is not calculated to aggravate the symptoms, without even the slightest chance of affording relief. It may be urged that the lining membrane was in a state of active gonorrhœal inflammation, and consequently thickened; but this will not explain the subsidence and several recurrences of the same phenomena, nor their cessation upon each occasion under the influence of opium and the warm bath. We cannot conceive the canal, under these influences, assuming its natural calibre, and then becoming thickened again, without any exciting cause, so as completely to obstruct the flow of urine. I therefore introduce the following, as more illustrative:—

CASE—I was called to visit, in great haste, a man about forty years of age, suffering from inability to void the urine, the passage of which he was endeavouring to effect by every kind of forcing and straining for three or four hours previous; but all to no purpose. On examining the hypogastrium, the bladder was found distended, producing a hard tumour, like a ball, above the pubes. He complained of intense pain, and a most urgent desire to pass his urine, which he had not done for upwards of twenty-four hours. He was subject to attacks of this sort, but much less severe, and which he attributed to stricture, brought

on by repeated attacks of gonorrhœa, several years before. Bougies had been frequently employed, and sometimes they passed readily into the bladder; upon other occasions no art or perseverance could effect their introduction.

There was no peculiarity in the stream of urine; it was full and of the natural form and appearance, flowing freely till the bladder was completely emptied. The presence of stricture was inferred in consequence of the liability to these sudden retentions, and the patient was therefore subjected to the usual modes of treatment for the cure of stricture.

I directed a grain of acetate of morphia for the first dose, and half a grain every twenty minutes afterwards, till relieved. Likewise a warm bath; but there were so many difficulties, that it could not be got ready in time, the patient having been relieved, passed urine in a full stream in about ten minutes after the third dose of morphia.

By attending rigidly to this patient's health, enjoining strict moderation and regularity, keeping up the activity of the skin by sufficient clothing, he perfectly recovered, without the use of instruments, for which indeed there never existed any real occasion, nor had there ever been any mechanical, or rather organic, obstruction in the urethra.

In this, the simplest form of spasmodic stricture, the obstruction is mostly limited to that portion of the canal embraced by the muscles. *The urethra, too, is always in a state of preternatural or morbid sensibility, scarcely tolerating the stimulus even of diluted, much less of highly concentrated urine. Any unusual stimulus applied to the mucous lining causes irritation, which is propagated to the muscles, and thus throws them into spasm, by which the passage is forcibly closed.* It is surprising how long spasm of this kind will continue, and I believe before it could be overcome by the most *adroit* mechanical dilatation the bladder would be distended to bursting.

If the history of this form of stricture be closely investigated, we shall find it associated with the nervous, or nervo-sanguineous temperament. The patient is highly irritable, easily excited, and the victim of every species of anxiety and apprehension. Digestion generally deranged, bowels irregular, either obsti-

nately costive, or uncontrollably relaxed, and these two conditions frequently alternate. The appetite fastidious, and so dainty that no article of food is either agreeable to the sight, or palatable to the taste. Flatulency, eructations, and hiccup are frequent concomitants.

Pulse seldom or ever regular, being disturbed by the most trifling incidents ; in many febrile heat of skin ; tongue seldom or never healthy-looking, being either red and glossy with a clammy or sticky feel, or coated with a sort of cream-coloured mucus.

One of the most remarkable and important circumstances, is that the urine never is in a natural condition. Hence it exerts an unnatural stimulating action upon the lining membrane—already morbidly sensitive—of the urethra, inducing spasm of its muscles, and thus closing the canal. To understand the matter, however, it will be necessary to consider the composition of the urine ; one thousand parts of which, according to Berzelius, are constituted as follows :—

Water	933.00
Urea	30.10
Lithic Acid	1.00
Organic matters inseparable from each other.	{ Lactic Acid, Lactate of Ammonia, colouring matters } 17.14
Mucus of the Bladder	0.32
Alkaline and Earthy Salts.	{ Sulphate of Potass 3.71
	{ ————— Soda 3.16
	{ Phosphate of Soda 2.94
	{ ————— Ammonia 1.65
	{ Muriate of Soda 4.45
	{ ————— Ammonia 1.50
	{ Phosphate of Lime and Magnesia . . 1.00
Fluoride of Calcium, a trace	
Silex	00.3
	<hr/> 1000.00

In examining the urine in both the simple and the complicated forms of spasmodic stricture, we should determine not

only the relative amount of solids, but also the nature of the principles in excess. We should also attend to its colour, transparency, opacity, cloudiness, smell, &c. Also, its density, and its action upon test papers.

The principles which, in excess, give to the urine those properties by which it excites spasmodic action to the muscles of the urethra, are urea, lithic acid, and the earthy phosphates, especially the ammonio-magnesian, to which we may add the mixed or that in which the ammonio-magnesian is mixed with phosphate of lime. The alkaline salts, when in considerable excess—those of potass, soda, and ammonia, for instance—cause spasm of the urethral muscles, when the mucous lining is in an irritable state.

The microscope is by far the readiest means to ascertain the nature of any urinary deposit, or of any film on the surface. Chemical examinations are, in my opinion, more operose and more tedious, I, therefore, myself, depend mostly upon the microscope, not only as more expeditious, but in some instances, the only means capable of affording information. We cannot by any other method determine whether the triple phosphate be the prismatic or the stellar salt.

MICROSCOPICAL CHARACTERS.

UREA.—The nitrate of this substance forms a sort of scaly crystals, which when once seen are easily again recognized. But it can seldom be necessary to have recourse to microscopical observation for the detection of urea; because, as already stated, the crystallization of urine on the addition of nitric acid, is quite sufficient of itself to show an excess of urea. The nitrate is delineated at A, Plate VIII.

LITHIC ACID.—When the lithic acid separates in the pure or uncombined state, it always assumes the crystalline form. In combination with certain bases it undoubtedly appears sometimes as an amorphous sediment. The form mostly assumed by the pure lithic acid is the *rhombic*. Sometimes, however, it ap-

pears in prisms, and these prisms are mostly of the rhomboidal form, transparent, thin, and of a yellowish or somewhat amber colour.

Sometimes they appear like *cubes*, but if closely observed the rhomboidal outline will be made out. Sometimes we find the crystals of lithic acid appearing as *serrated tables*, sometimes the serræ present crescentic margins which are opposed to each other. Dr. Golding Bird at one time imagined that lithic acid occasionally appeared as *cylinders*; but in this he was deceived, as a little ether by its evaporation produces a current and causes the crystals to roll over, and exposes their true figures. The rhomb, however, is the form by which the lithic acid will be most frequently detected. The various forms of lithic acid are shown in Plate IX.

LITHATE OF AMMONIA.—We often find acrid urine abounding in this salt. It is not difficult to recognize. One of its chemical properties is a much greater, or a much more ready solubility in a warm than a cold fluid. On this account, urine abounding in lithate of ammonia will be passed perfectly transparent, and free from cloud or sediment, the lithate of ammonia being held in solution by the urine at the temperature at which it is passed from the bladder; but when it cools down to the ordinary temperature, the lithate of ammonia separates, and gives the urine a cloudy or turbid appearance. When all the lithate of ammonia finally subsides to the bottom the supernatant urine becomes perfectly clear and transparent. Urine turbid from diffused lithate of ammonia, is rendered perfectly clear by warming it in a test tube, and this character alone would be sufficient to detect the lithate of ammonia.

MICROSCOPE.—If a drop of urine, turbid from the mechanical suspension of lithate of ammonia, be placed under the microscope, the particles of the salt present an amorphous, opaque appearance. On gently heating the support, these particles dissolve in the heated menstruum, but re-appear as the latter cools. If to a drop of the turbid urine we add, under the microscope, a drop of diluted hydrochloric acid, the ammonia

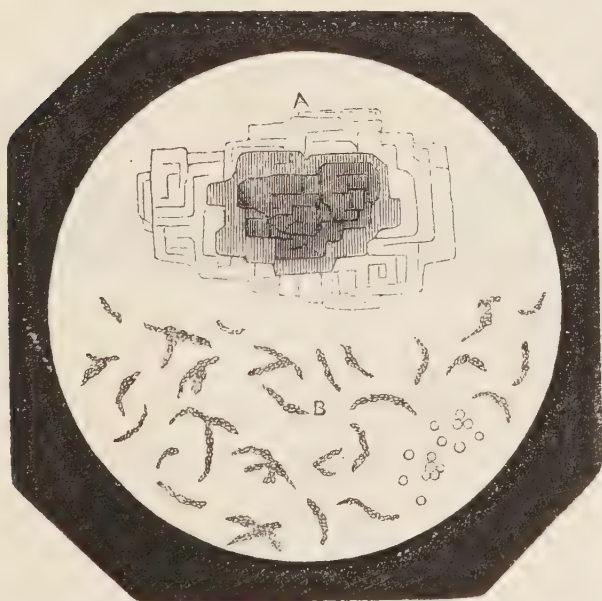
unites with the acid, setting the lithic free, which in crystallizing assumes the rhombic form.

Lithate of ammonia either gives a peculiar acidity to, or at all events predominates in urine, of such peculiar acidity, as to excite spasmodic action of the urethral muscles, and thus often induces spasmodic stricture. Hence the diagnostic history, at least, of this salt appeared to me a proper object of the present inquiry. Its appearances are shown at B, in Plate VIII.

EARTHY PHOSPHATES.—The earths which appear in the urine are magnesia and lime, and these are mostly combined with ammonia and phosphoric acid. The triple, or ammoniaco-magnesian phosphate is sometimes mixed with phosphate of lime, and these are named the *mixed* phosphates.

TRIPLE OR AMMONIO-MAGNESIAN PHOSPHATE.—There are two varieties of this deposit, as already noticed, varying in the proportions of the bases. In the urine they can be distinguished only by microscopical examination, as their modes of crystallization present characteristic differences. One of these is named the neutral, and the other the basic variety.

PLATE VIII.



NEUTRAL, OR PRISMATIC SALT.—This salt, named *prismatic* from the prismatic form of its crystals, is a beautiful object under the microscope. The more usual form is the triangular prism, its extremities sometimes bevelled off, sometimes truncated. Some appear like square prisms, or like two triangular ones, adhering by their contiguous sides. These forms will be best understood by reference to Plate X., occupying the lower left hand corner. They are beautifully transparent.

PLATE IX.



PTERYGOID CRYSTALS.—This is a rare variety, which assumes a sort of winged-shaped appearance; the wings connected by their acute extremities, and stretching out from their point of union-like wings. They are more curious than important in a pathological point of view. Plate X.

BASIC TRIPLE PHOSPHATE.—It is questionable if this be a

primitive form of crystallization, for it has not as yet been observed till after the urine has been voided, and treated by a re-agent. When artificially and rapidly formed, as by means of a chemical re-agent, it forms a sort of star as a centre, from which from four to six radii shoot out. These rays vary in breadth from a mere line to a tolerably broad spoke. The edges of the rays present a serrated appearance; in some instances crenated like the toothed edges of the leaves of the dandelion. In some cases, as where more slowly formed, the radii assume a broad foliaceous appearance. Once seen they cannot well be mistaken.

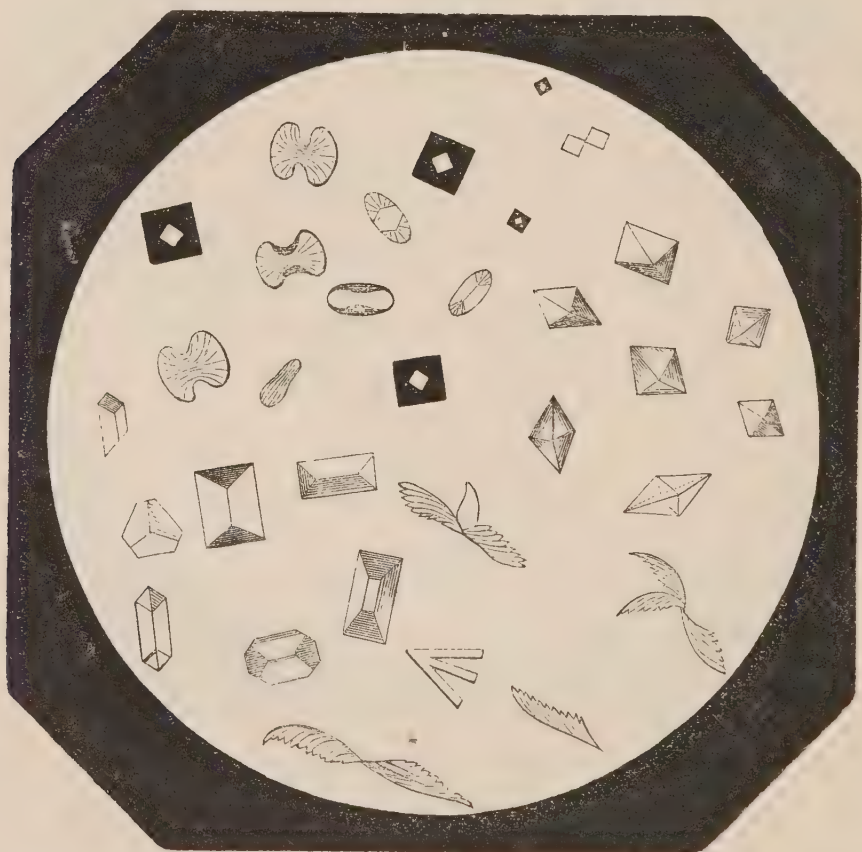
PHOSPHATE OF LIME.—Simon asserts that this salt appears in a crystallized form; but this statement is completely at variance with observation in this country. Indeed, it may be questioned if phosphate of lime ever appears as a urinary deposit. In certain diseased states of the mucous lining of the bladder phosphate of lime appears in great plenty, but, under these circumstances, it is probably secreted by the coats of the bladder. The prostate gland too frequently secretes phosphate of lime, and concretions consisting almost entirely of this salt agglutinated by animal mucus, or some such organic principle, have been found in immense number and of various sizes in the prostate.

MIXED PHOSPHATES.—But although phosphate of lime does not appear to form an independent urinary deposit, it not unfrequently separates mixed with the triple phosphate, giving rise to the *fusible* deposit. The phosphate, whether alone or in mixture as above, almost always appears in the amorphous form. Sometimes it appears as roundish, opaque granules, which will not transmit the rays of light.

OXALATE OF LIME.—This salt, until observed as a urinary deposit by Dr. Golding Bird, was always supposed to be confined to concreted masses. Thus it was only recognized as forming the mulberry and the hemp-seed calculus. Now, however, we know that it appears as a urinary deposit, but to be

detected only by the microscope. Its mode of crystallization is very peculiar, and affords a ready means of detecting it. In order to detect it, a little management is necessary. It frequently occurs mixed with lithate of ammonia; for its discovery, therefore, we allow the urine to stand for some time in a tall glass vessel. As it cools, a cloud, more or less dense, forms, and ultimately subsides to the bottom, leaving the supernatant urine clear. The supernatant portion is to be poured off and the remainder gently heated in a test-tube or watch-glass. A drop or two placed upon a slide and examined will disclose the oxalate of lime by the forms of the crystals. These crystals appear as minute shining octohedres.

PLATE X.



If the appearance of the crystals be obscured by other matters the turbid portion of the urine may be mixed with hot distilled water, and allowed to stand. A sparkling shining deposit will be observed at the bottom. The fluid may be drawn

off, and the residue emptied into a watch-glass; if to this, some warm distilled water be added, and the whole left at rest, the oxalate of lime will be seen collected in the bottom of the capsule. The fluid may be drawn off by a pipette; after which a feather or camel-hair brush will extract from the residuum a number of the crystals, which may be thus transferred to a slide and examined in the microscope.

The most usual form is the octohedral with sharp angles and edges, Plate X., upper border; but when very minute, and viewed under a low power, as a half or three-quarter inch object glass, they appear like adherent cubes; but a quarter or eighth of an inch lens will show that the octohedral is the true form of the crystal.

If the crystals be allowed to dry they assume a sort of square or cubic form; or rather that of two cubes, one white and transparent, enclosed with an exterior one which is dark. The four angles of the internal point to the sides of the external, and, consequently, the sides of the internal are opposed to the angular parts of the external.

A very remarkable form of the oxalate of lime is occasionally, though very rarely, observed. They seem in shape like two kidneys united by their notched or sulcated margins. From a certain resemblance in shape to "dumb-bells" they have been named accordingly.

All the foregoing conditions of urine may be associated with such nervous excitement and irritability of the urethra and bladder as to induce spasm and temporary stricture upon any call to pass water. It is difficult, under these circumstances, to determine exactly whether in addition to unnatural irritability of the urethra the urine be really more stimulating in its qualities. There can be no doubt that many cases of spasmodic stricture are associated with such morbid states of urine, and that by plentiful dilution the phenomena may be suspended. A gentleman, very lately, consulted me under the following circumstances:—

CASE.—He had been suffering for some months from severe urinary irritation. He had frequent desire to pass water with,

occasionally, an inability to void any urine, notwithstanding the urgent desire. Lately, however, the urine passed more slowly than formerly, and in a somewhat diminished stream. His digestive powers weak, irritability of skin, with patches of a reddish hue, and these of an obscurely leprous character. He had endured a great deal of mental anxiety, his pursuits of an intensely studious nature, and highly important. Being in Scotland, under these circumstances, he consulted a gentleman there of considerable eminence, who on examining the urine found it abounding in crystals of oxalate of lime in octohedres. He gave me to understand that his inconvenience was explained as follows:—"The crystals in the urine were frequently deposited in the urethra, and some entering and being detained in the lacunæ, &c., their sharp angles, by pricking the sensible lining, caused all his distress."

On his return to London, I saw him in consequence of a severe retention of urine. An attempt to introduce a bougie had been tried before I saw him, which excited violent spasm, with shivering exactly like the cold stage of an ague. I, therefore, directed him an anti-spasmodic draught with a quarter of a grain of hydrochlorate of morphia, to be repeated every half-hour or twenty minutes, till the more urgent symptoms gave way. He was placed in a hip-bath, and warm fomentations applied to the hypogastrium; mild diluent warm drink. In an hour he passed urine without the least difficulty, which was rather high-coloured and somewhat turbid.

The urine, placed in a tall glass jar, on cooling became highly turbid, from the separation of lithate of ammonia. It was allowed to stand till the whole of the salt subsided, leaving the urine above perfectly transparent, and of an amber colour. The sediment was allowed to settle down well, the supernatant urine carefully poured off, and the precipitate then washed with warm distilled water. When the whole of the lithate of ammonia had been thus removed, there was found remaining shining crystals in tolerably large quantity, and which placed under the microscope showed most clearly and distinctly the octohedral outline, and were satisfactorily proved to consist of oxalate of lime.

The patient's digestive functions were deranged; tremors and

spasm supervening upon the most trifling causes. I, therefore, avoided every cause of excitation ; carefully regulated the diet, at the same time invigorating the general system by the cautious administration of bitters and tonics. By way of affecting the condition of the urine and tranquilizing the nervous system, I directed the nitro-muriatic-acid, in which the due proportion of morphia had been previously dissolved, so that he took about the one-tenth of a grain three times in the day, and from a quarter to half a grain each night at bed-time.

The first remarkable phenomenon was the total absence of all trace of the oxalate of lime, and a great reduction of the urethral irritability. The patient could now pass the urine without any great effort or straining, notwithstanding it still continued to throw down the lithate of ammonia, though in greatly diminished quantity. The stream, however, yet continued reduced in size ; but after a perseverance in this plan of treatment, the urine began to assume its natural appearance ; the lithate of ammonia gradually disappeared, and the patient ultimately got well, without recourse to mechanical dilatation or the use of instruments.

TREATMENT OF SPASMODIC STRICTURE.

It has been already shown that not only are the digestive functions greatly deranged in this form of stricture, but that there is always some peculiar unnatural condition of the urine. When the disease has persisted for some time, the whole frame participates, and the nervous system becomes extremely susceptible. Now the idea of attempting to relieve, not to say cure, such a state of things, by mechanical dilatation of the urethra, seems most preposterous. Such seems but the converse of that folly which would attempt to relieve compression of the brain from fractures with depression, by calomel and castor-oil. Yet such absurdities are occasionally enacted, and bougies and catheters are marshalled against obstructions, which are but the chimeras of the imagination, without any real existence. It may, therefore, be laid down, and safely adopted as a leading

rule of practice, that mechanical dilatation is wholly inapplicable to purely spasmodic stricture.* In what, then, does the treatment really consist? It may be summed up in a few words:—Tranquilize the nervous system, correct the errors of digestion, restore its due tone and vigour to the whole frame. These indications are to be fulfilled by narcotics, bathing, neutralizing the salts, bitters with aperients, and, lastly, the due administration of tonics.

NARCOTICS.—I begin with narcotics, because one of the results of spasm may be a complete retention of urine, and it often happens that this proves the immediate cause of the professional summons. Indeed, sometimes the symptoms of this form of stricture are so obscure or trifling that the patient has no suspicion; but suddenly finds himself the victim of the most unrelenting retention.

In such cases there is nothing so beneficial and, indeed, so effectual in relieving the retention as opium. It, therefore, should be immediately resorted to, and in doses sufficient to produce the required effect. Whatever the preparation, the dose should be large and fully proportionate to the urgency and violence of the symptoms. The most effectual preparations, in my judgment, are the salts of morphia, and the liquor opii sedativus. A grain, or even two, in urgent cases, of the hydrochlorate of morphia may be given for the first, and it may be afterwards repeated in small doses at short intervals, until relief has been obtained.

The liquor opii sedativus I have found a very active preparation; it will sometimes agree better with the patient than morphia. With the opiate, camphor may be usefully combined, for, notwithstanding it may not be deemed a powerful agent, it certainly is often found a valuable auxiliary to opium; and we should avail ourselves of every possible means of relaxing spasm.

* It is to be presumed, that as the condition of the urethra can be now readily ascertained by illuminated exploration, that we shall not be at a loss to discover whether stricture really exist or not. The advantage of the illuminator upon this principle alone is of the greatest importance.

WARM BATH.—Nothing, perhaps, contributes more as an auxiliary than the warm bath. Every endeavour, therefore, should be made for the immersion of the patient. If possible, a slipper bath, in which the entire body to the very chin could be immersed, should be selected: but if this be impossible, a hip bath, as deep as possible, should be substituted. It has often occurred to me to find that, on immersion, the patient suffering from spasmodic retention has been relieved by the bath, and the bladder evacuated, before it had even been possible to get the anti-spasmodic prepared and administered to the patient. In such cases, I certainly advise the suspension of the narcotic, until another attack indicates its use; and I have thought it necessary to record this view of the principles of treatment, because I have seen, upon one or two occasions, the opposite plan adopted, and, I am strongly inclined to think, not without some considerable inconvenience. The means necessary to subdue a retention of urine, from spasm of the urethra, are rendered tolerable, in many instances, only by the pain and suffering endured; and when these have been removed, their administration often induces both local and general disturbance. This view may be not only illustrated but exemplified, by the practice of the surgeon, performing one of the capital operations in surgery. Under these circumstances, he resorts to opium in doses so large and powerful, as would not be tolerated except the system were suffering from a very great and intense shock. So in the event of retention, were the opium given before relief had been obtained by other means, the intensity of pain would readily reconcile the system; but relief once obtained, the economy rebels at any further attempt to trespass. But, in addition, we should not attempt to habituate the patient to the use of a remedy which should be reserved for effecting some great object; and the more we become habituated to any medicine, the larger and more powerful will be the dose required to effect a given purpose.

INHALATION OF CHLOROFORM.—After the powers of chloroform in subduing sensibility were clearly established, it occurred to me that it might be made available in the treatment of stricture.

Not long since, a very severe case of complicated spasmodic stricture, attended with retention of urine for thirty-six hours, occurred to me. It was a case of organic stricture, attended with violent spasm, producing complete retention. All attempts at introducing the catheter failed. The patient was bled, immersed in the warm bath, and took large doses of opium; still the catheter could not be passed. In this emergency I determined to try chloroform. When the patient was lulled, after one or two trials, I succeeded in passing the catheter without much difficulty.

Since the above occurrence, I have tried it in two or three other cases, in which there was some little difficulty, although by a little management, easily surmounted. As, however, in organic stricture, there must be frequent recourse to the catheter or bougie, I do not think the resort to chloroform so frequently would be altogether safe. Upon this, however, at present, I cannot positively decide. In the case of spasm, I am satisfied from what I have seen, that chloroform will be found to furnish a most valuable and efficient auxiliary.

CONSTITUTIONAL TREATMENT. — Hitherto we have been considering the means necessary for the immediate relief of a condition which cannot be suffered to continue long without imminent danger to life. Although the urine is retained in the bladder, and cannot pass, the secretion is neither suspended nor suppressed. Hence every moment urine is entering the bladder; and as not a single drop can be voided, it is evident that the organ is suffering a gradually increasing amount of distension, and, unless relieved, must burst. But having effected the voidance of the urine, we must next endeavour to trace to their legitimate causes the spasmodic actions of the urethra.

Perhaps one of the most important circumstances for notice is the state of the urine. We shall now, therefore, proceed to consider the treatment of these morbid urinary conditions.

EXCESS OF UREA.—It is well known, and it has been shown by Dr. Prout and others, that when urea has appeared in any very unnatural excess in the urine, much irritation of the uri-

nary organs has been the consequence, and that a diuresis amounting almost to diabetes has prevailed. Indeed such cases are frequently mistaken for diabetes, and treated accordingly.

When excess of urea is connected with spasmodic stricture, we must endeavour by every possible means to reduce the quantity to the regular standard, and to render the urine in other respects as natural as possible. There is for the most part *diuresis*; but if dependence be placed upon the reports of the patient, the practitioner may be deceived upon this point. Although the patient may pass two, three, or even four quarts of urine in the twenty-four hours, he will probably state that the secretion is not over abundant. He may not pass a great deal at any given time; but from the frequency of the calls, a great deal of urine is voided in the twenty-four hours.

Narcotics are certainly the most effectual agents in this state of things, and therefore should be administered in adequate doses.

Colchicum is often beneficial in these circumstances; and perhaps no preparation is preferable to the acetic extract. The colchicum and the narcotic may be combined; and that preparation of opium that acts upon the skin, which is mostly in an inactive state, should be preferred. Thus the compound powder of ipecacuanha answers remarkably well. I have found the following a very active formula:—One scruple of the acetic extract of colchicum, one drachm of Dover's powder, and as much extract of hyoscyamus as will form a pill mass. This divided into thirty pills, of which one or two may be taken night and morning, will, in a short time, afford relief.

Diet is of great importance here. It should be light and nutritive, but by no means exciting: it should also be simple, consisting of a moderate proportion of animal food with farinaceous articles. The patient ought to avoid, as much as possible, exciting or intoxicating liquors; but if he has been accustomed to fermented liquids, a small quantity of good sound stout, or some of the more generous wines, may be allowed. But large quantities of drink, and more especially those which stimulate the kidneys and the other portions of the urinary system, should be most carefully avoided. At the same time moderate exercise,

either walking or riding on horseback, will tend to restore the strength; and if possible the patient should breathe a pure, clear, and wholesome atmosphere. Sea-bathing I have often seen restore a patient whose habitual debility had resisted every variety and form of tonic.

The state of health is often of that character, to lead the incautious to believe alteratives and purgatives not only indicated, but absolutely essential. There is nothing, however, more injurious than mercury. Indeed it may be questioned which is the more injurious—calomel or violent purgatives. Both, however, are unquestionably extremely injurious; and where a tendency to spasm in the urethra exists, almost invariably calls it into action, as will be seen from the following case:—

CASE.—A gentleman, aged about forty, had been suffering for some considerable time from ill-health, and for which he underwent a variety of treatment. It was generally supposed that he suffered from indigestion. Some slight swelling, with tenderness upon pressure, in the right side, led to the conclusion that the liver was enlarged and affected in a slight degree with chronic inflammation. For this he was persuaded to take calomel and taraxacum. A few leeches, followed by a blister upon the right side, removed all appearance of fulness; and then a small quantity of camphorated mercurial ointment was rubbed in every night. His health, instead of improving, greatly declined; he became languid and enervated, extremely irritable, and his temper peevish and impetuous. His appetite failed; his nights were very restless, the restlessness being much aggravated by frequent calls during the night to make water. It was under these circumstances that his attention was first directed to the fact, that although the quantity of water passed at any one micturition was not remarkably great, yet from their frequency he must pass a considerable quantity in the twenty-four hours. When measured, he found the entire quantity to range between six and nine pints.

The mercury was continued, till a slight, but still a decided effect had been produced upon the gums. He observed that the

stream of urine, at times, became much diminished in size, and occasionally presented a twisted appearance. An irritation of the skin succeeded, and a few patches of pityriasis made their appearance. At last he found that the urine, which was preserved with a view to measuring the quantity passed in the twenty-four hours, though perfectly clear and transparent when voided, after a short time became thick and turbid, ultimately letting fall a copious deposit of a creamy consistence and a reddish appearance.

Under these circumstances, being in company one evening, he was constrained to resist the calls to make water; which though very urgent at first, still he was enabled to control, and after some time the desire completely subsided. He, however, continued in society completely heedless, and indeed unconscious of any necessity for emptying the bladder. On retiring, he attempted to pass water, although he felt no desire; but he could pass none. On arriving at home, he neither felt an inclination, nor could he pass water, and in this condition retired to bed.

In the course of the night, however, he awoke with a most urgent desire, without the ability, to pass water. He felt a sort of burning pain in the hypogastrium; the region itself tense and rather swollen. He was attacked with straining, and the most violent efforts to micturate, and he was at last obliged to send for his medical attendant; who, on his arrival, immediately attempted to relieve him by the introduction of a catheter. All attempts, however, failed; and it was under these circumstances that I was called upon, about seven o'clock in the morning, to visit him.

I found him suffering from the most intense pain, the most violent straining, and abortive efforts to pass water. When it was found impossible to introduce the catheter, he was put into a hip bath; but although the sufferings were somewhat mitigated, the symptoms were in no way relieved. I immediately recommended the following draught:—

R. Liq. Op. Sed. ʒ j

Vini. Antim. ʒ j

Vin. Ipecac. ʒ ij

Liquor. Am. Acet.

Aquæ Distill. a a ʒ ss. ft. haustus statim sumend.

The preceding, reducing the opium to half a drachm, to be repeated every quarter of an hour or twenty minutes till relieved. As soon as a large slipper bath could be filled with water, at 100 Farht., the patient was immersed in it, and its temperature ultimately raised to 110°.

In about ten minutes he felt extremely sick and languid; perspired profusely; the straining ceased, but it could not be satisfactorily decided whether he had passed any water. In about twenty minutes the draught was repeated; and in about five minutes afterwards, he felt himself passing water freely in the bath. He was now removed and put to bed; the mercurial medicines were discontinued; Liq. Ammon. Acet. and Tinct. Hyoscyam being substituted.

He persevered in this plan for a week or ten days, making water freely and without any inconvenience. The bowels were regular, and at the expiration of the time above stated he was put upon a course of steel, which completed his cure.

This appears to me to be a case in which all the symptoms resulted from the action of mercury upon a highly irritable system. Several examinations of the urine afforded the following, as its general characters:—When first passed, of a deep amber colour, free from cloud or sediment. On cooling, became turbid, ultimately letting fall a copious precipitate, the supernatant urine becoming clear, but a little paler, sp. gr. 1.018—1.020; reddens litmus paper.

A portion shaken up, so as to suspend the sediment, placed over a lamp in a glass capsule became almost immediately transparent, the salt, lithate of ammonia, redissolving on warming the urine. On continuing the heat, cloudy rays shot out in every direction from the centre towards the circumference, the fluid at length becoming completely opaque. This opacity evidently arose from the coagulation of albuminous or chylous admixtures. Urea in excess was detected by the ordinary test, by which the albumen was at the same time coagulated.

I believe that mercury in certain states of system induces a chylous or albuminous coagulability of the urine; at least I have observed this condition after the exhibition of mercury, in cases in which previously there existed no evidence whatever of any

such state. This, too, I have mostly observed to be in some way connected with an habitual excess of urea, and of such importance do I consider this, that I think it would be in many cases advisable, before adopting a mercurial plan of treatment, to examine the state of the urine. If this were properly attended to, I am satisfied the resort to mercury would not be quite so indiscriminate as it has hitherto been. In the present case I admit I cannot take upon myself to determine what may have been the state of the urine previous to the administration of mercury; all I can do is to infer from probable, though not absolutely unquestionable data. As the patient recovered, especially on the administration of the steel, not only the albumen but the urea disappeared, as well as what may be termed the equivalent of the latter, the lithate of ammonia.

When the nervous system has been tranquillised by the administration of narcotics carried, as observed, to the requisite extent and no further, the patient's strength ought to be recruited by tonics. The consideration of these, however, may be deferred till the other diatheses have been considered. Notwithstanding, it will be right in this place to notice the tincture of muriate, or sesquichloride of iron, which has long enjoyed the reputation of a specific in some forms of dysuria and retention of urine from spasm. Ten drops of the *Tinctura Ferri. Sesquichloridi* of the London Pharmacopœia may be given every ten minutes during the spasm, and from fifteen to twenty minims may be taken three or four times a day after the spasm has been relaxed.

LITHIC ACID.—When lithic acid is secreted in excess, severe ardor urinæ, and even dysuria or difficulty in passing water, is a frequent attendant. Spasm, and consequent retention of urine, often set in when the urethra is in an irritable state.

The lithic acid may prevail either pure or in combination with one of the alkalies, more especially ammonia or soda. The alkaline lithates are not only more soluble, but also, in separating, hardly ever assume the crystalline form like the free acid.

LITHATE OF AMMONIA.—This salt, as already explained,

separates as an amorphous deposit, and not until the urine has cooled. Very slight errors in diet are quite sufficient to cause not only an excess of the alkaline lithates, but also their deposition on the urine cooling. Except, perhaps, in reference to spasmodic stricture, the separation of the salt only on the cooling of the urine is of no great importance; but as its presence renders the urine more stimulating, even in this diminished quantity, it is of importance in a surgical point of view. In some cases, however, it is so abundant that it renders the urine turbid even as it passes from the bladder.

These sediments are so readily induced by irregularities in diet, that due attention in this respect naturally suggests itself as one of the first principles of treatment. The food should be light, and easy of digestion. Farmers more especially indulge in suet puddings and hard dumplings; and I have repeatedly seen large quantities of the soluble lithates separated from the urine, from indulgence in these and similar articles of food. Hard salted meats, pickled pork, produce similar effects. When there is a remarkable flatulence—and there is always a greater or less tendency to flatulence in indigestion—soups, and indeed most kinds of fluids, cause a more or less abundant deposit of the lithates. The more simple and digestible the food, the better. Hard malt liquor—especially the *old* ales of the farming districts—with the thinish, or ascendent wines are equally injurious. The same may be said of over-repletion.

Exercise is also of importance. It should not be carried to the extent of causing fatigue, but merely to cause a healthy circulation of the blood, so as to keep up the necessary excitement of the skin and other organs. To preserve the due action of the different viscera, the state of the bowels should be particularly attended to. If they be allowed to get torpid and inactive, to a corresponding extent will every other function become deranged.

Medicine in the milder forms of these deposits, indeed, seems hardly necessary. If any *materia medica* become necessary, it will be found comprised in soda-water, with some gentle sedative, as hyoscyamus. The requisite dose of the tincture may be given

in a glass of soda-water, once or twice a day, according to the urgency of the case. If soda-water be not convenient, the common effervescing draught made by dissolving the carbonate of soda, or the bicarbonate, in water, and giving it with the due proportion of lemon juice or citric acid. A tonic is seldom necessary, as the habit generally yields to regimen; but if indicated, there is nothing better than a mild chalybeate. Of this class, I may here mention the Tunbridge Wells mineral waters. A method for rendering this very agreeable has been lately adopted by Mr. Gorringe, of that town. The water, as taken from the well, is surcharged, under a pressure of several atmospheres, with *carbonic acid gas*, and then bottled off for use. The acid gas not only destroys the metallic, but gives a lively sparkling, and grateful taste. I have given this water a trial, and I feel bound to say, that I have found it to answer remarkably well. If necessary, a few grains of the carbonate of soda, or of the bicarbonate of potass, may be put into the tumbler, and the chalybeate draught poured upon it. In this way, both a tonic and alkaline agency may be obtained from one and the same dose of medicine.

LITHIC ACID (CRYSTALLIZED).—When the lithic acid begins to deposit in the crystallized form, the diathesis has arrived at a much greater degree of inveteracy; and the symptoms will prove not only much more urgent, but also obstinate. The urine, too, in this condition is much more stimulating, and much more apt to induce spasm of the urethra.

As in the former cases, the utmost care should be taken in regulating the diet, air, and exercise. When lithic acid separates in a pure, or nearly a pure state, the alkalies are found to give the most decided relief. They may be given with the intention of preventing the precipitation of the lithic acid, by holding it in solution; or with the view of securing their *alterative effects*. It is for the latter purpose that they are required in the present circumstances. By their alterative action they may prevent the excessive secretion of lithic acid, and upon no other principle are they indicated here.

The *Liquor Potassæ* is certainly the most effectual form; but is, at the same time, the most unmanageable to the stomach.* It is best adapted, according to my experience, to those cases in which there prevails a tendency to *leprous* eruptions, psoriasis, and similar affections of the skin; or where there are evidences of a scrofulous taint.

I prefer giving the potass in simple solution; and I fully agree with Dr. Prout, that by giving it in combination with tonic and bitter infusions, the good effects of both are often lost; probably the water of the infusion acting the part suggested in the footnote below. There is no objection, however, to any spirit—aromatic or otherwise—which may assist the diuretic effect of the alkali; for independent of the increase in the quantity of water in the urine rendering this fluid more bland, the absolute quantity of lithic acid seems to be thus diminished. A very good formula is the following:—

℞. *Liquoris Potassæ* mv.—viij
Spiritus Ætheris Nitr. ʒ ss
 ——— *Junip. Comp.* ʒ j
Tinct. Hyoscyami. ʒ ss—ʒ j
Syrup Simp. ʒ j
Aquæ Distill. q.s. ut ft. haustus bis. ter.; 4ve. in
 die sumendus.

Where we require the full alterative effect, the liquor potassæ may be given in decoction of sarsaparilla, or some appropriate bitter infusion; taking especial care to use only distilled water in their preparation.

The carbonated alkalies, however, are much milder, and will

* Pure distilled water should be invariably selected as the vehicle for remedies of this sort. In a case which occurred to me very lately, in consultation with another practitioner, I proposed *Liq. Potassæ* in doses of five minims twice or thrice a day. I was told that the patient would bear much larger doses, as he had been already taking it in half-drachm doses without any effect. My reply was—but not in distilled water! I need scarcely add, that the hard water used as a vehicle completely destroyed the causticity of the potass. My colleague very soon became convinced it had been hitherto administered under most disadvantageous circumstances.

often agree when the caustic ones would cause intolerable irritation. We must recollect, too, that an alkaline state of urine is very unnatural, and likely to irritate the bladder; from whence it may spread to the urethra, and thus induce spasm, the very thing we wish to avoid. Little, indeed, need be said about the administration of the carbonated alkalies. They may be given in simple solution, as in distilled water; or their solution may be supersaturated with carbonic acid gas as in ordinary soda-water. A few grains of bicarbonate of potass to each glass of ordinary soda-water presents an eligible formula.

The causticity even of the carbonates prevents a lengthened continuance in their use; add to which, that they have a peculiar urinous taste as well as smell, which is offensive to many: yet there are no remedies so decidedly efficacious. In order, therefore, to obtain all the benefits to be derived from the alkalies, without being subjected to the inconvenience sometimes attending their use, we may give some of the neutral salts, in which a *vegetable* acid is the neutralising agent. It is a singular fact, but one well attested, that the vegetable acids, even when combined with the bases, readily undergo decomposition *in transitu*, being resolved into carbonic acid, which appears in combination with the base in the urine. Of this character are the citrates, tartrates, &c., of potass and soda; and if the urine of persons taking the ordinary effervescing draughts of potass or soda be examined, it will be found to contain the carbonates of these bases. Thus the urine may be rendered alkaline, or at least *neutral*, by a lengthened perseverance in the use of seidlitz powders, or the citrate of soda or of potass.* A very good formula is the following:—

R. Sod. Sesqui-Carbonat. \mathfrak{g} j—3 ss

Potassæ Bicarb. gr. v—x

Syrup Simp. 3 iss

Aquæ Distill. 3 ix m. ft. haust. cum succ.

Limon. coch. ij amp. inter effervescendum, sumend. To this may be added, or not, a little of the tincture of hyoscyamus.

* Lemon Kali acts in this way.

As, however, it sometimes happens that the alkalies, no matter how modified, disagree, it has been proposed to correct the acidifying actions of the system by some of the earths, as being less caustic and more mild. Magnesia has a high saturating power; and, from its insolubility, but little causticity. Its insolubility, however, is some objection; as it is apt to concrete, getting mixed with the mucous secretions of the intestinal tube. It has been known to form hard solid masses in the intestines, which have excited inflammation, and have even caused death. Magnesia, attention being paid to these points, may in some circumstances be advantageously given in doses of ten or twelve grains, and repeated according to circumstances.

The insolubility of magnesia is one of the greatest objections to its use, and, unlike the alkalies, its carbonate is as insoluble as the pure earth itself. However, this inconvenience is not wholly irremediable, as the carbonate may be dissolved by excess of carbonic acid. This mode of rendering carbonate of magnesia soluble has been resorted to for medical purposes, and as it not only forms a very agreeable beverage, but also has no tendency to concrete, it may be applied to when other remedies of this class, from their causticity, are found objectionable.

TRIPLE AND MIXED PHOSPHATES.—Stricture of a spasmodic character prevails in connection with these deposits, whenever there is great irritability of the urethra. Deposits of this description are frequently induced by injuries to the back; sprains in the loins, arising from lifting heavy weights, or carrying heavy loads. It is not improbable that the spinal marrow becomes involved in such cases, and it is generally observed that the whole nervous system becomes sensibly engaged.

In the treatment of the lithic acid, we found it advisable to abstain as much as possible from acids, and also acescent articles. In this form, however, acids are very useful, and sometimes afford the only means of keeping the urine natural. The most powerful are the mineral, and the hydrochloric and the nitric are generally preferred. From ten to twenty or thirty minims of the diluted acid may be given in a glass of distilled water two or

three times a day, watching closely the effects, as well upon the stomach and system at large, as more immediately upon the urine. By the cautious exhibition of one or other of these acids, the salts are held in solution, and thus a state of urine, which almost always causes irritation of the bladder and urethra, is obviated.

If, however, the earthy diathesis should be obstinate, a more lengthened use of these acids might be required than would be compatible with the healthy tone and energy of the stomach. In such circumstances it has been proposed to resort to the vegetable acids, as the citric or the tartaric. The tartaric cannot, perhaps, be continued in anything like active doses for a lengthened period with impunity, and, therefore, possibly the citric will be found the more generally applicable. This even will agree as afforded naturally in the juice of the lemon, when the stomach will rebel against the crystals, as artificially extracted from the juice of the fruit. But in all these circumstances we are to regard any effects of this sort upon the urine, as merely palliative; the real remedy consists in improving the constitution, and correcting the errors of the functional system.

OXALATE OF LIME.—It is held by some that this diathesis is closely allied to the lithic acid. It is true that we can readily extract the formula of the oxalic from the lithic acid, and, consequently, we have only to imagine some derangement in the secreting functions, to account, pathologically, for the occasional appearance of the oxalic acid. Now, whenever oxalic acid exists in solution, and still more readily if combined with a base as a soluble salt, if lime or any of its salts be held dissolved in the same liquid, oxalate of lime will form and be precipitated. Hence it is that the addition of oxalic acid to ordinary urine causes a cloudiness, and on standing, a precipitate falls down, consisting mostly of oxalate of lime. This oxalate, however, is soluble in the nitric, and the hydrochloric acid if the proportion be large. It likewise dissolves very readily in the nitrio-muriatic acid, and it is this acid which has been recommended by Dr. Prout. The requisite dose, therefore, of the mixed acids may be given in distilled water as the vehicle. I never saw an instance in which the crystals of oxalate of lime continued to

appear while the patient was under the influence of the acids, no matter how abundant before. In some instances, on discontinuing the use of the nitro-muriatic acid, the crystals again separate from the urine; but in other cases they do not reappear for a considerable time after laying aside the acid.

Hitherto we have been considering the means necessary to counteract the effects of certain morbid states of the urine, and this is of the most essential service. But to complete the cure, we must correct the errors of the system. This, in a medical point of view, is to be effected by the judicious selection and administration of alteratives, tonics, &c.

ON SYPHILIS AND GONORRHOEA.

I cannot quit this subject without making a few remarks respecting the treatment of two specific diseases, syphilis and gonorrhœa, which, it has been shown, contribute so much to the production of impotency; for I feel convinced that there is much room for improvement in the treatment of these diseases. In my opinion, if we could dispense with such disagreeable and nauseous medicines as copaiba, &c., and substitute more speedy and more effectual methods of cure, we should do a great deal in benefiting the patient, and averting those after-consequences, some of the more serious of which have received a large share of attention in the preceding pages.

I have had ample opportunities of observing the various modes of treatment practised for the relief or cure of syphilis and gonorrhœa, at all the great schools in Europe—London, Edinburgh, Paris, and the Continent generally; and the plans at these places are so much at variance with each other, and in particular cases, so diametrically opposite, that we should be inclined almost to infer that we were observing the treatment of different diseases, but designated by one and the same name.

SYPHILIS.—In the foregoing pages it has been shown that impotency is often connected with syphilis, in the relation of cause and effect. It may, however, be a question how much ought to be attributed to the disease, and how much to the treatment adopted. If the treatment be inert or tardy in its effects; if, further, it tend to inveterate and establish the syphilitic irritation in the system, impotency may be looked for, as at least an occasional result.

Mercury is the mineral upon which the greatest reliance has been placed for the cure of syphilis, in both its primary and secondary forms. Now, although I have not particularly no-

ticed mercury as one among the causes of impotency, I believe it would not be difficult to show that such an effect could be most clearly and satisfactorily traced to the influence of this mineral upon the system. What can be more injurious than repeated salivations? If, then, the general mode of treating syphilis be so far objectionable, may it not be worth inquiring whether there be any other method equally efficacious but less objectionable? Carmichael, in his clinical lectures, observes, that not many years since, patients affected with a complaint thus easily cured were subjected to a six or eight weeks' salivation. He also states that there are many inveterate mercurialists who close their eyes against all modern discovery, and who still rigidly adhere to a barbarous practice. The same author also further states, that as soon as an ulcer secreting a morbid poison, capable of infecting the constitution, has been healed, danger of contamination to the system is, to a very great extent, reduced, if not altogether averted.

While the ulcer is yet in its primary stage, excavated, and secreting a mere lymph, he endeavours instantly to destroy the whole surface by the free application of an *escharotic*. When the eschar separated and was thrown off, Carmichael states that he had invariably the satisfaction to find that he had to deal with a simple sore, instead of a poisonous ulcer. The application is to be continued so long as the ulcer retains an excavated appearance, and continues to secrete a thin and poisonous matter, the different appearances of which are shown in Plate XI. When the discharge assumes the purulent character, and the surface of the ulcer seems smooth, raised, and fungous, he gives the *Argentum Nitratum* a decided preference over all other preparations; a solution of which, in the proportion of from one grain to three of the salt to one ounce of distilled water, he considers best adapted for the purpose. At the same time, aperient medicines, with small doses of the *Antimonium Tartarizatum* are given. Under this plan the ulcers are found to heal in a period of time so short, as will hardly be credited by those who trust to mercury alone for the cure, and with a far less proportion of secondary symptoms than falls to the lot of the decided mercurialists. As I consider this a decidedly su-

perior mode, I cannot but feel highly gratified that it has been recently introduced into one of the largest and best regulated of the metropolitan hospitals.

M. Ricord asserts, whatever form a chancre may assume at its commencement, it ought to be treated by the abortive method, *for there is no authentic instance of secondary symptoms succeeding to ulcers which had been destroyed within the first five days after infection.* Therefore, if during the first five or six days after an illicit or impure connexion, a pustule of any kind should appear upon any part of the organ exposed to infection, no matter what its nature may be, and independent of and without investigating

PLATE XI.



Showing microscopical appearances in the matter of Chancre.

A B. The appearances assumed by the matter of chancre in its earlier stages, when placed under the microscope.

C D E F G I M, present some of the most characteristic of the forms assumed, at different periods, by the matter of chancre.

the exact diagnostic characters it may present, it should be ruptured, and its ground well cauterized: for no bad results can follow, even though we be mistaken, and that the pustule should prove to have arisen from eczema or herpes. But when the disease has its seat in the lymphatic system, these means are not applicable; and in such cases we must have recourse to means similar to those which are employed for destroying buboes.

But if, as often happens from our being consulted too late, or the plan just explained not extending sufficiently deep, that there is great difficulty in destroying at once the whole of the infected part, and in consequence, chancre is developed; under these circumstances, whatever may have been the duration, whatever the nature or the form under which it may have commenced, it ought to be destroyed as promptly and as effectually as its extent and locality will permit. These are rules which cannot be too strongly inculcated, nor too forcibly urged, and against which prejudice is doomed to contend in vain. Daily observation and mature experience will ultimately carry with them the conviction.

From the researches of Ricord, it appears that in all the cases of constitutional syphilis which came under his observation, it was found that the chancres lasted, or, in other words, had never disappeared under a period of ten, twelve, or fourteen days; and in the majority, the period was prolonged to three, four, five, or even six weeks.

No one can doubt for a moment that, for absorption or constitutional infection, certain conditions are essential. It is also readily conceivable that these conditions may be absent at one period, and yet set in or supervene at any interval. If, then, we review these facts in relation to chancre, we must admit that, although the conditions essential to the possibility of general infection may be wanting at first, yet that they may set in at any moment. Hence it follows, that so long as chancres are permitted to exist, these conditions may set in; and the chancre exerting its poisonous agency, the system may become tainted. It clearly follows, therefore, that that treatment, by which the local cause of constitutional infection can be most quickly arrested or suppressed, must prove the most effectual preventative

to secondary symptoms. What, then, can be better adapted to this purpose than the speedy cure of the syphilitic ulcer, and the immediate arrest of the poisonous secretion? The Argentinum Nitratum is well adapted for this purpose.

But when the chancre is seated in those tissues, which may be said, from their vascularity, to be engorged with blood, or when it occupies a considerable extent of surface, the Argenti Nitras does not act with sufficient energy, and as observed by Ricord, imitating the effect of gangrene, which reduces chancre, when it attacks it, to the state of a simple lesion. In these circumstances I have witnessed the best results from a paste—Pâte de Vienne—used by M. Ricord, in the wards of the Hôpital des Veneriens, at Paris. Its use, however, requires great caution and strict attention, to prevent its acting upon too great an extent of surface, as it should be strictly confined to the diseased part; or, at most, to but a very small portion of the healthy tissue beyond. Chancres, to which these means are inapplicable, or which, notwithstanding their employment, still retain their specific character, will require another mode of proceeding.

Although, as a general principle, a too frequent dressing of ulcers or wounds acts injuriously, by disturbing the healing process, but more especially that of cicatrization, still it does not hold good in the case of chancres, inasmuch as the secretion, from the ulcerated surface, becomes an active and continued agent in exciting the disease. Hence it follows, that chancres are an exception to this rule, and that they should be dressed several times a day to remove the morbid secretion, before it can do mischief. We must also take care that pus is not harboured by the crusts which form on cutaneous chancres, as pus thus confined might contaminate the neighbouring parts.

While a chancre continues in a state of ulceration, cauterization is to be applied so long as the ground under the eschars presents the syphilitic characters, or the discharge the syphilitic appearance under the microscope. *But when these have disappeared, and healthy action has commenced, the cautery must be suspended. Nor can the mind be too strongly impressed with these principles. If escharotics be continued when the granulations have become healthy; or discontinued, while the secretion still retains*

the syphilitic virulence and the poison accumulate : in the first case the healing powers will be checked, and the patient's recovery greatly retarded ; in the second, the poison will be absorbed, and successive contaminations may be the consequence. Thus, if the chancres continue indurated for two or three weeks, I have no hesitation in asserting, that nineteen out of every twenty patients will be attacked with secondary symptoms, which will require prolonged constitutional treatment, which might have been avoided if the foregoing precautions had been adopted. To oversights of the above descriptions may be attributed phymosis, paraphymosis, and various other consequences, not excepting even gangrene.

It was found at the Hôpital des Veneriens, that greasy matters were not suited to the treatment of chancre ; and of unguents, the mercurial ointment was observed to prove the most injurious in its effects. Under its use the chancres increase in number, frequently become inflamed, coalesce, and thus extend themselves. If induration be absent, I find that similar objections apply to the use of black wash.

It has been already observed that it is unsafe to let the pus, secreted by a chancre, remain in contact with the chancrous surface ; we should, therefore, endeavour to check or suppress the exudation of matter. Ricord, for the former purpose, used merely dry lint, which acts by absorbing the matter. I, however, prefer a small piece of sponge, moistened, but well squeezed out. Ricord further states, that he found the most speedy and best results from the use of the "aromatic wine of the French Pharmacopœia."* The chancre should be well washed with the wine, but without any violence, and a small piece of sponge, moistened with the same, but well squeezed, should be laid over it. The sponge absorbs any matter as it is secreted, and removes it from the surface. There are a few other manipulations, which, if observed and adopted, this wine will be found, not only the best curative, but also one of the very best prophylactics.

The advantages of this plan are, that it prevents, or at least

* Ricord, p. 262.

is not followed by that succession of chancres which mostly attend the other modes of treatment. The bottom of the chancre becomes altered and its secretion checked; and, according to Ricord, the wine acts as a very energetic astringent on the contiguous parts, rendering them unsusceptible of inoculation. *

If any pain be produced, it may be allayed or mitigated by the application of ten or twelve grains of opium in an ounce of water, applied externally; the proportion of the narcotic to be increased or diminished according to circumstances. If the secretion from the chancre continue profuse, a spirituous or vinous decoction or infusion of tan will almost invariably check it.

We must enjoin the strictest continence (which is always the safest plan) if the seat of the cicatrices continue indurated, as the rupture of these may be followed by relapse; and against which, nothing but absolute continence offers anything like a perfect security. Such appear to be the general principles upon which chancres should be treated, but there are certain characters which either prove a malignant virulence in the chancrous matter; or, in consequence of peculiarity of temperament, the chancre during its progress manifests a degree of irritability or malignancy, which renders its management much more difficult and much more complicated. The most usual seat of chancre is the angle between the glans and frænum, the frænum itself, the glans, or the prepuce. In this locality, herpetic and other erosions, from neglect of cleanliness or other causes, often appear, and if a chancre so situated be free from indurated walls or base, it may be confounded with erosions of the character above mentioned. In such circumstances, a mere superficial cauterization, and a single fold of fine linen between the prepuce and glans, will be quite sufficient for their cure; but if more refractory, the plan already detailed will be required.

PHAGEDÆNIC CHANCRES.—These present under two principal forms, which may be distinguished as the *indolent* and the *irritable*. When a patient affected with the former is much

* Uhi supra.

debilitated, and the system greatly reduced, generous diet and stimulants are not only the appropriate means, but become absolutely indispensable. Opium, under such circumstances, is our sheet anchor; for it not only subdues pain, allaying irritation, and soothing the system, but acts as a diffusible stimulant. But, notwithstanding the best directed measures, chancres of this sort continue obstinate and resist all the usual modes of treatment. It has repeatedly occurred to me, to see all the external applications before mentioned, aided by the various means suited to relieve visceral disease, and to improve the general health, fail. I am indebted, however, to my friend, Dr. Venables, for a most valuable formula, the efficacy of which he had so many opportunities of testing during his services in the Peninsular Campaigns with the army under the Duke of Wellington. It is prepared by dissolving from ten grains to a scruple of the Hydrargyri Nitrico-Oxydum in concentrated nitric acid, and cautiously adding distilled water, but so as not to cause the precipitation of any part of the oxide. Should any be thrown down, it should be re-dissolved by the addition of a few drops of the concentrated acid. It is applied to the chancre with a camel-hair pencil; the application may require to be repeated three or four times. My colleague, Dr. Venables, assures me that he found this, both in his practice at the Ordnance Hospitals in England and on the Continent, the most valuable escharotic, completely destroying the diseased, and exposing the healthy surface, after two or three applications. My own trials fully corroborate these enconiums, as I always found three or four applications sufficient to completely arrest the diseased action, and produce a healthy sore; and this, even when the sore was spreading with fearful rapidity, and carrying destruction and sloughing wherever it extended.

BUBOES.—Whether bubo be a primary or secondary form of syphilis, is a question as yet hardly decided. Be this as it may, there is one circumstance which ought to be attended to, and that is their suppuration. They, as well as chancres, secrete a poisonous pus, by the absorption of which the system may be contaminated. Matter, therefore, should not be allowed to re-

main or to accumulate in them. Hence, they should be opened early, and evacuated. This is attended with two advantages: first, we diminish the chance of constitutional contamination by absorption; secondly, we limit, or probably altogether prevent the extensive sloughing of the skin and integuments, which almost always follows the lengthened confinement of pus in a bubo. When the external skin becomes inflamed, and has assumed a purple or dark livid hue, extensive sloughing, and most unseemly cicatrices, are the almost inevitable consequences. The bubo having been opened, we should endeavour to correct the condition and improve the secretions from its cavity. The mode of effecting these purposes may be easily collected from what has been already advanced.

When buboes occur in leuco-phlematic habits, or are complicated with scrofula in any of its various forms, we must attend to the general health, administer tonics, and correct the effects of disease by due attention to diet, air, and exercise. When the system has been much exhausted by a profuse and lengthened suppuration, no remedy has appeared to me more beneficial, or more effectual in restoring tone and energy, than the Protiodide of Iron, and the Ferr. Citras cum Quina.

GONORRHŒA.—In this country, the chief reliance for gonorrhœa seems to be upon cubebs and copaiba; but the latter, from its disagreeable taste and nauseous qualities, is soon abandoned by the patient, however obstinately resisted by the surgeon. Nor are these the only objections. They are so slow and tardy in their progress that, as often happens, the seeds of serious affections—organic diseases of the testicles, and of the different parts of the urinary system—are sown, or even developed before they manifest the exertion of any control over the disease for which they were administered.

While in the dilemma in which the observance and contemplation of these facts had placed me, an intimate friend applied to me, while resident in Paris, in consequence of a severe gonorrhœa. He commenced, however, by declaring that no consideration whatever should induce him to take any medicine containing either cubebs or copaiba, for he could endure neither

one or the other. Even the smell he found so nauseous and disagreeable, that it caused intolerable sickness, and even vomiting. He also attributed an attack of swelled testicle, and a stricture under which he was then labouring, to large or overdoses of these medicines. Feeling at a loss how to act under these circumstances, I consulted M. Ricord, surgeon to the Hôpital des Veneriens, upon the case, and he recommended a solution of the *argentum nitratum* to be injected into the urethra. The pain, scalding, and discharge were increased upon the first application; but their severity was kept down by the exhibition, internally, of sesqui-carbonate of soda, tincture of *hyoscyamus*, and *mist. camph.*, with a cold application to the penis. By the next day, nearly all the inflammatory symptoms had subsided; and the injection was again used with a slight return of the inflammatory action, which, however, speedily yielded to the local application. It was unnecessary to resort to the injection again, or indeed to pursue any other treatment, for in a few days from the first application I was agreeably surprised to find the patient perfectly cured. The great advantage in this case was, that the patient recovered in an incredibly short time, without taking a particle of disagreeable medicine, and which he abhorred so much, that nothing I believe could have induced him to submit. I carefully watched numerous other cases treated in a similar way, all of which recovered very rapidly, and without any bad symptoms, although many had resisted the ordinary treatment for weeks, and some even for months.

When I first commenced practice, I was in the habit of treating gonorrhœa in the usual way; that is, if there was much inflammatory action in the urethra, with severe scalding, and other symptoms of irritation, I mostly gave purgatives and cooling medicines, with plentiful dilution. But if it was a first attack, and the inflammatory symptoms ran high, I relied principally upon antimonials, soda, *hyoscyamus*, and camphor; cold applications to the penis and perineum. These means generally proved efficacious in speedily removing the inflammatory symptoms, or at all events, in reducing their severity. On subduing the inflammation, I usually directed a solution of *argentum nitratum*, in the proportion of one grain or more, according to

circumstances, to the ounce of distilled water, to be injected into the urethra night and morning. This plan I pursued for a considerable time, in both my public and private practice. I must confess, however, that my success by no means equalled my expectations, and I found that the progress towards recovery was not only slow and painful, but that various secondary effects frequently set in to aggravate the distress and the patient's suffering. I therefore determined to abandon the plan I had hitherto pursued, but only on the understanding that I myself, should be the operator, and inject the solution. I owe it to truth and justice, freely to confess that my success since has far exceeded that of my former method. I have had opportunities of testing and comparing the success of the two methods, and I must acknowledge that all the cases, and these by no means few, treated on the latter plan, have recovered much more speedily and much more effectually, inasmuch as they have not experienced any of the severe consequences which so frequently supervene virulent gonorrhœa.

I now feel assured that the failure in the earlier part of my career is solely attributable to neglect, in not adopting several precautions essential to complete success. And first with respect to the syringe itself.

In my opinion, no other material than platinum or gold is at all suitable for this instrument. All other metals are more or less acted on by the nitrate, and consequently the purity of the salt affected in a corresponding degree, and its efficacy impaired. Again, its capacity should not be great. If, like one of the ordinary metallic syringes, it hold an ounce, the quantity injected will produce too much distension of the urethra, already in a painful and highly irritable state. The syringe should not be capable of holding more than two fluid drachms. It should be furnished with a pipe at least two inches long, and about the diameter of a No. 5 catheter. The length of the pipe should be such that it can be introduced fully into the urethra, and reach the disordered part. No other material than gold or platinum will answer for the syringe; bone is soon acted on by the injection, and even glass, both from the liability of the pipe to be broken off in the urethra, and the cork to which the piston is

attached acts upon the injection and decomposes it, or renders it impure.

Another matter of importance is the mode of preparing the injection itself. If the ordinary waters be used for dissolving the nitrate it will be decomposed, in consequence of the alkaline and earthy salts, especially chlorides, which these waters hold in solution. If, then, such waters be used, we should have an insoluble chloride, or carbonate of silver mechanically suspended, instead of a solution of the nitrate. On this account the purest distilled water should be used, and its purity should be tested and satisfactorily ascertained, before we dissolve the salt. The solution, too, should be made at the time of using, for if it be exposed to the light, decomposition will take place, and the purity and efficacy of the injection be alike affected. These may appear niceities, rather than important directions; but I can only say that I have found attending to these minutiae of the utmost service. To use the injection we proceed as follows:—

The injection having been carefully prepared, and at the first in the proportion of a grain to the ounce of distilled water, which, if requisite, may be subsequently increased; we direct the patient to empty his bladder, to prevent the necessity of micturition for some time after the operation. The patient being seated on the corner of a chair, the operator opposite to him lays hold of the penis, and introduces the pipe of the syringe, previously charged with the injection, into the urethra, and passes it on to the requisite depth. The piston is now gradually but steadily pressed down so as to expel the injection. Having emptied the syringe, we keep the pipe in the urethra for about a minute, to secure the contact and action of the injection upon the diseased mucous surface. The instrument is then to be carefully withdrawn.

In some instances the patient suffers little or no inconvenience, and therefore requires but little after attention. If, however, as occasionally happens, the patient experience any uneasiness or painful irritation, he may take an anodyne draught, consisting of sesqui-carbonate of soda, tincture of hyoscyamus and camphor mixture, and which may be repeated every three or four hours as

the symptoms require. A cold lotion should be applied to the penis, and a suspensory bandage should be in readiness to support the testicles if requisite. This bandage should fit exactly, and care should be taken that it cause no inconvenience nor occasion any pressure to the part it is intended to support.

The patient should be cautioned strictly to avoid everything calculated to irritate or excite inflammation. He should be instructed, too, to retain the urine as long as he possibly can ; but when this becomes no longer practicable, a small quantity of the Oleum Amygd. Dulc. should be carefully introduced into the urethra, to defend the mucous membrane as much as possible from the acrimony of the urine.

If, however, notwithstanding all these means, severe irritation should come on, I have found a few grains of the Extractum Hyosciami rubbed down in a little warm water, to which were added about ten minims of Batley's Liquor Opii Sedativus, to form an excellent soothing lotion. A few drops of the above mixture should be very carefully injected into the urethra, and retained there for a sufficient length of time. At the same time cold lotions should be kept constantly applied to the penis and perineum. These means, with perfect quiet and a spare low diet, so far as my experience goes, have always proved sufficient to control any severe symptoms that may have arisen.

When the patient suffers much from repeated attacks of chordee, in addition to keeping the penis enveloped in cold wet cloths, I have found a suppository, composed of hyoscyamus and camphor, a most valuable means of allaying the irritation and keeping down those painful erections of the penis which are productive of such excruciating torture to the patient. If these instructions be carefully followed and strictly adhered to, I think the duration of the disease will average between the two extremes of three days and three weeks. But it is to be recollected that these are the extreme durations, and I would set down the average period, under careful management, between about five days and a full week.

But if, on the other hand, the injection have been resorted to too soon, and before the *acute inflammatory* stage have been subdued ; or if the material of which the syringe has been

constructed act upon and decompose the nitrate; or the capacity too large, suppose holding an ounce instead of two drachms; the injection made by dissolving the salt in impure water; but, above all, if the pipe of the syringe be not of the due length and diameter, the consequences may prove any thing but satisfactory.

An unskilful operator, too, will contribute much to render this mode of treatment unsuccessful. I attribute my want of success at the commencement of my practice to trusting to directions given to the patient, and resigning the different manipulations to persons either careless or incompetent. But since I adopted the plan of taking upon myself the actual charge of the minutiae, and performing all the more delicate operations with my own hands, I cannot bring, when I have been able also to secure the strict co-operation of the patient so far as he was concerned, I cannot, I say, bring to my recollection a single instance of failure, or of any prolonged severity of symptoms; the average period of cure being generally within a week or ten days.

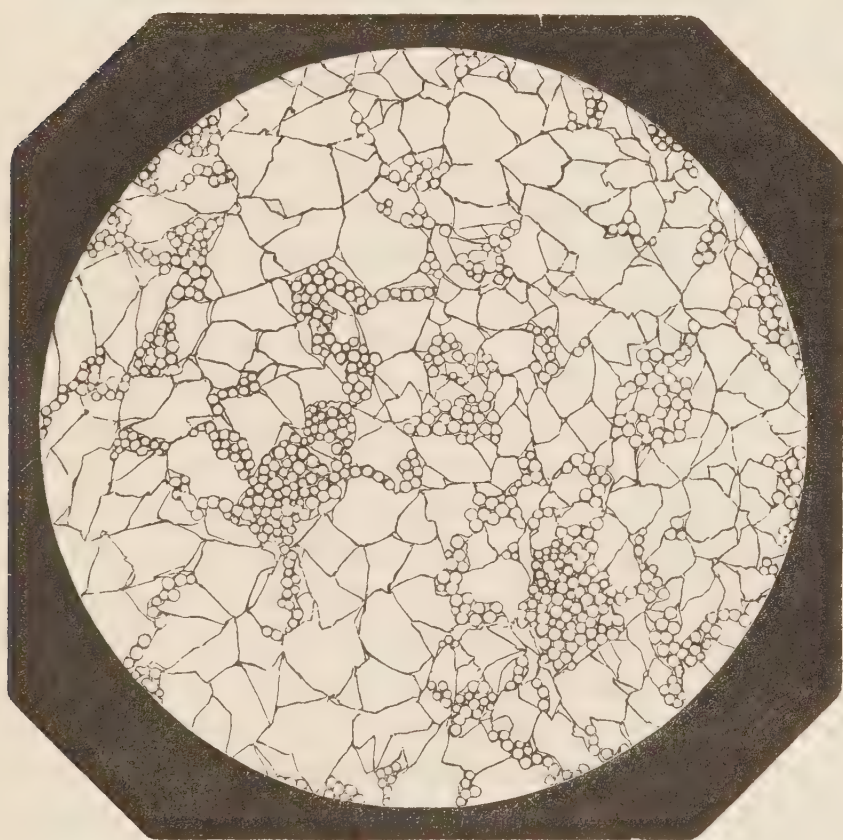
M. Ricord, an authority upon this subject which stands pre-eminent,* observes, with his usual frankness and candour, that the use of *Argentum Nitratum* in gonorrhœa deserves minute and attentive consideration, and that its employment should be much more frequent and extended than it has hitherto been, not only with a view to determine the best mode of its application, but also to discriminate the peculiar circumstances to which it is best suited, and in which it is most likely to succeed.

He farther states that injections in the treatment of gonorrhœa possess numerous advantages to recommend them in preference to the other modes. A most important one is, that concealment of

* M. Ricord enjoys opportunities which can fall to the lot of but few. He is attached to the "Hôpital des Veneriens à Paris," making up 645 beds devoted wholly to the accommodation of patients suffering from gonorrhœa and syphilis. During the twelve months that I was a pupil at this hospital, upwards of four thousand patients from one or other, or both of these complaints, in their various stages and degrees were admitted: consequently, the opportunities of studying and investigating their nature are ample.

the patient's position is much more easy than under any other method of cure; and a still more important advantage is, that they exert no influence whatever in obstructing the functions of any other organ; nor do they affect the general health. The only objection, and that which has caused them to be laid aside by some, is more an *ideal* effect assigned to them by some of inducing *stricture*. But, upon calm consideration, we must

PLATE XII.



acknowledge that strictures of the urethra occur only in patients who have suffered from repeated attacks of gonorrhœa; or who have endured a gonorrhœa unsubdued or neglected, and for a very lengthened period. Such persons resort to injections too late, when in truth alterations of tissue have already taken place. But should stricture occur, even when injections had been resorted to, and at the proper time, it has been only when the

injections failed to effect the necessary control over the progress of the disease, and proved unequal to the arrest of their advance. Under such circumstances, in consequence of the protracted duration of the gonorrhœa, morbid alterations of tissue, unfairly, and even falsely, attributed to the remedies, set in, and induce the various effects. But neither has it been possible, in all cases, to ascertain the real and existing condition of the tissue, before using the injections. Ricord farther declares, that he has found the judicious use of injections to afford the most prompt and favourable results; and his experience warrants the inference, that the more speedy the cure, the less the chance of organic changes of tissue in the urethra, and which he has always found to prevail in a ratio proportioned to the duration of the gonorrhœal disease.

There is matter intimately connected with this subject, and which from circumstances of recent and, I will say, painful occurrence, it would be almost unpardonable in me to pass over in silence:—I allude to discharges from the urethra, involving suspicions affecting both the character and the chastity of persons above all suspicion. Discharges of a purulent nature, strongly resembling that from gonorrhœa, occasionally arise from ordinary inflammation of the mucous lining of the urethra; nor are such altogether of such rare occurrence. I am frequently applied to by persons suffering from purulent discharges from the urethra, and who look upon them as gonorrhœal, although, in certain instances, such an origin is almost morally impossible, notwithstanding the circumstances may lead to the most serious and lamentable results. I fear not a few chaste and virtuous women have been the victims of misapprehension and foul suspicion under such circumstances, and rendered wretched, their characters blasted, and all their prospects destroyed.

When the reputation of a virtuous female is thus at stake, it is the bounden duty of the practitioner to pause, to reflect, and maturely to weigh the consequences, before he pronounce the awful doom. The responsibility of the practitioner is the most solemn and awful that can possibly be imposed, exceeded only by that in which the question involves life or death. We may remember, that not long since, an unfounded and calumnious

imputation in high life was productive of the most painful consequences, and it is to be hoped also of the bitterest remorse. In such a condition of circumstances, let us not be rash or inconsiderate; and, for the unfortunate victim of suspicion, while yet balancing on the pivot of her destiny, for her, I say, let not our hearts be cold, or our tongues be wordless.

I have been carried away, as it were, by this train of reflection, in consequence of a very recent occurrence, the particulars of which will be found in the following detail :—

CASE.—A gentleman called upon me, stating that he had been recommended to me, though, till then, a perfect stranger, by a mutual friend. He stated that he was induced to apply in consequence of having, for the first time, on the 2nd of February, 1844, observed some yellow-coloured stains upon his linen. He took no further notice for a day or so, but finding these appearances increase rather than diminish, he examined his urethra, and found that there was a discharge of a yellowish, thick, purulent-looking fluid, which was easily pressed out from the urethra. Under these circumstances, he consulted a medical gentleman, who, after having made the usual inquiries, immediately pronounced the disorder *gonorrhœa*; and directed copaiba and the other remedies usually employed in such cases. But as I have been since informed, he felt by no means content, and he suffered much from anxiety, in consequence of which, at the solicitation of the friend before alluded to, he consulted me.

I examined carefully into the matter, but more particularly the urethral discharge (the characters of which, when the results of gonorrhœa may be seen by a reference to Plate XII.) by means of the microscope, and upon due deliberation, felt quite warranted in dissenting from the correctness of the opinion previously given. I stated that I looked upon the discharge as originating in something of a very different nature from a gonorrhœal taint. The gentleman appeared more surprised than satisfied with this statement, and expressed a wish that his professional attendant and myself should meet in consultation, as it was matter of serious moment to him. This being agreed to, and an interview arranged, we met; upon which occasion a

very minute microscopical examination of the discharge was made, and the particulars of the case thoroughly investigated and fully discussed ; the result of which was a conviction on our parts, and a conjoint declaration of our unanimous opinion, that the discharge was *not* gonorrhœal.

Notwithstanding, however, the patient still seemed doubtful and dissatisfied, and consequently proposed that the state of his wife's health* should be ascertained ; declaring that he was placed in the greatest possible perplexity, as, whatever the nature of his disorder, he was satisfied that it could not be derived from any illicit source. His lady, whose feelings and distress of mind (for the parties occupied a high position in society, and moved in the most fashionable circles) may be more easily imagined than portrayed, at the unfounded imputation, evinced not only the utmost willingness, but the most ardent desire that her innocence should be satisfactorily established, and her reputation rescued from aspersion and unjust suspicion. I need hardly say that the result was perfectly satisfactory, and the injured lady was at length fully, and most justly, re-established in her husband's confidence, love, esteem, and respect.

I have introduced the above detail to show how guarded we should be when our opinion is sought under such circumstances ; and if regularly educated medical practitioners are liable to fall into error and commit mistakes, how little reliance ought to be placed upon the capabilities or opinions of those whose knowledge and whose character entitle them to neither our confidence or our respect. I make these comments because I know of one instance in particular, in which a great deal of misery and wretchedness were entailed upon a most virtuous and respectable lady, by the impudent and unfounded dogmas of an arrant quack.

* This was the first I heard of his being a married man.

A REPLY,

TO AN ARTICLE IN "THE LANCET."

AN article indulging in gross insinuations, reflecting upon my character and professional reputation, obtained insertion in a recent number of *The Lancet*. The editor and proprietor of this journal, on his attention being directed to the groundless nature of the calumny, and to the malevolence and rancour of the charge, immediately repudiated all connection with it, declaring that the obnoxious paragraph gained admission into the pages of the journal without either his knowledge or approval; and further assured me, that it could never have obtained insertion, except, as in the present instance, through a violation of his instructions, and in disobedience to his positive orders, viz:—that no article be inserted without his supervision and previous approval; and, to use his own words,—“Strange to say, it was the only one out of the whole of the original articles which I did not read.” Under these circumstances, Mr. Wakley felt himself called upon, as an act of justice, to disown the offensive imputations, and to insert a contradiction, a copy of which I here transcribe:—

“We regret to find that an article appeared in our number of the 22nd ult., reflecting upon the character and professional reputation of Dr. Dawson, which, upon inquiry, we find to be unfounded. We, therefore, as an act of justice, repudiate the animadversions alluded to, and take an early opportunity of stating our belief that they were undeserved, and of expressing our regret that they were inserted in our pages.”

To an honourable mind—the “*mens sibi conscia recti*”—and confident in its own purity, an acknowledgment of the wrong done—a positive denial of the justice or application of the scurrilous imputations, and the expression of a sincere regret at having been unintentionally the organ of circulating an un-

founded and malicious slander, ought to prove, and be accepted as, a full and satisfactory apology.

Why not, then, drop the subject? why not bury it in oblivion? This I should have done had the machinations of some secret enemy terminated with this, his first abortive attempt at slander, on its refutation and defeat: I should have been content to forget a circumstance, the contemplation of which could only serve to excite my indignation and contempt. But the slander is circulated anew. *The Lancet*, with the page folded down, and the paragraph referring to me, containing the libel, underlined, has been sent by post to my friends and patients; three numbers were brought to me on Monday after the contradiction appeared, by three gentlemen who are under my professional care. Since then I have been informed of several having been transmitted under precisely similar circumstances.

It has fallen to my lot to arouse the anger, and call forth the vengeance of some less successful candidate for the professional confidence of the public; and to gratify the feelings of disappointment, jealousy, and revenge thus engendered, this individual, who lurks in the dark, with the utmost abhorrence shunning the light—with that cowardice which ever characterises low and base cunning, concealing himself behind the reviewer, and under cover of his influence—spits forth his venom. But I tell this crafty slanderer, this would be assassin of character and hard-earned reputation, that he is unmasked—that I have my eye upon him—that he is betrayed; and that, in less than five minute's walk, I could put my finger upon his worthless head.

The obnoxious imputations purport to be part and parcel of a legitimate *review*, in the hope that under such a disguise they might escape the observance and detection of the editor, had the article undergone his supervision. But the reader will search for principles of pathology refuted; modes of practice rejected and condemned, as both unphilosophical and unsuccessful; and errors innumerable detected and exposed: but he will search in vain; and it is only in a subsequent number of the journal that he will be able to discover, according to the pretended modesty and mawkish delicacy of the reviewer, that I have published upon an EXCEPTIONABLE subject—pretended, I

say, for this must be pretence, as Dr. Smyth made a powerful appeal to the profession, through the pages of *The Lancet*, for the 28th August, 1841, which I shall here reprint :—

“It is a subject not less interesting to the moralist than to the medical practitioner; and it really is surprising to see that nothing worthy of notice is to be found on a matter so important in the various writings of standard authors. This circumstance appears remarkable and unaccountable, when experience convinces us that sexual weaknesses and imperfections, either hereditary or acquired, constitute the great majority, perhaps nine-tenths of the causes of nervousness, mental imbecility and derangement. How then are we to account for a fact like this—a fact of such frequent occurrence, and so highly philosophic and instructive, as it undoubtedly is, having obtained so little attention? Can a general feeling of ill-exercised tenderness towards the depraved habits of most of the pitiable sufferers have operated in preventing the matter from having been duly investigated, and candidly avowed and discussed, or has it resulted from ignorance? The former we are disposed to think can scarcely have been the case; for with the medical practitioner, less frequently perhaps than with any other professionalist, from the confidence so readily reposed in his calling, does delicacy or prudery supersede utility.”

After what has been stated, it cannot be thought, even by a casual reader, that I have selected a subject upon which the profession had already a sufficient store of information. It is true, I might have chosen a more popular subject on which to write; and there would have been no great difficulty in compiling a work on diseases of the heart, lungs, or some other equally attractive disorder, if my object had been mere publicity. But that I may place the motives that actuated me fairly before the reader, I beg to submit the following extract from the work complained of :—

“Among the many works so constantly issuing from the medical press, replete with the most ingenious speculations, and enriched with principles founded upon the closest and most attentive observations, it unaccountably happens, that none have been specially devoted to the subject which constitutes the principal matter of the following pages. Indeed, it would seem not very inconsistent to infer that, in reality, no such diseases ever existed, as they could hardly have escaped the inquisitive vigilance of modern medicine. Strange, however, as this may appear, such diseases not only prevail, but to an extent hardly to be credited, unless by those who have devoted themselves to inquiries upon the subject.”

A residence for some time on the Continent, during which I had the good fortune to enjoy the advantages of the instructions

afforded by witnessing the practice of Professor Lallemand, whose researches were the only ones upon this important, though IGNORANTLY DERIDED subject, afforded me opportunities for studying the pathology and general phenomena of these (EXCEPTIONABLE) maladies, which I must have sought for in vain at any of the schools in this country.

On my return to England, and before going to press, I gave the profession and the public ample proof that I had not misspent my time, by presenting myself to the Royal College of Physicians in London, and obtaining their "Letters Testimonial," being the youngest member who ever obtained that honour. I shall here transcribe, without further comment, the regulations, and enumerate the testimonials, &c., required by the College before the candidate can present himself for examination; for I owe it to my friends and patients, after having been thus assailed, to prove to the world that I have some little pretension to its confidence.

"ROYAL COLLEGE OF PHYSICIANS OF LONDON.

"REGULATIONS REGARDING CERTIFICATES AND TESTIMONIALS.

"Every Candidate for a Diploma in Medicine, upon presenting himself for examination, shall produce satisfactory evidence,—

"1. Of unimpeached moral character;

"2. Of having completed the twenty-sixth year of his age; and

"3. Of having devoted himself for five years, at least, to the study of medicine.

"The course of study thus ordered by the College comprises:—

"Anatomy and Physiology; the Theory and Practice of Physic; Forensic Medicine; Chemistry; Materia Medica and Botany; and the principles of Midwifery and Surgery.

"With regard to practical medicine, the College considers it essential that each Candidate shall have diligently attended, for three entire years, the Physicians' practice of some General Hospital in Great Britain or Ireland, containing at least one hundred beds, and having a regular establishment of Physicians as well as Surgeons.

"Candidates who have been educated abroad will be required to show, that, in addition to the full course of study already specified, they have diligently attended the Physicians' practice in some General Hospital in this country for at least twelve months.

"Candidates who have already been engaged in practice, and have attained the age of forty years, but have not passed through the complete course of study above described, may be admitted to examination upon presenting to the Censors' Board such testimonials of character, general¹ and professional, as shall be satisfactory to the College.

“ The first examination is in Anatomy and Physiology, and is understood to comprise a knowledge of such propositions in any of the physical sciences as have reference to the structure and functions of the human body.

“ The second examination includes all that relates to the causes and symptoms of Diseases, and whatever portions of the collateral sciences may appear to belong to these subjects.

“ The third examination relates to the treatment of Diseases, including a scientific knowledge of all the means used for that purpose.

“ The three examinations are held at separate meetings of the Censors' Board. The *vivâ voce* part of each is carried on in Latin, except when the Board deem it expedient to put questions in English, and permits answers to be returned in the same language.

“ The College is desirous, that all those who receive its diploma should have had such a previous education, as would imply a competent knowledge of Greek, but it does not consider this indispensable, if the other qualifications of the Candidate prove satisfactory; it cannot, however, on any account, dispense with a familiar knowledge of the Latin language, as constituting an essential part of a liberal education; at the commencement, therefore, of each oral examination, the Candidate is called on to translate *vivâ voce* into Latin, a passage from Hippyocrates, Galen, or Aretæus: or, if he declines this, he is, at any rate, expected to construe into English a portion of the works of Celsus, or Sydenham, or some other Latin medical author.

“ In connection with the oral examinations, the Candidate is required, on three separate days, to give written answers in English to questions on the different subjects enumerated above, and to translate in writing passages from Greek or Latin books relating to medicine.

“ Those who are approved at all these examinations will receive the following diploma under the common seal of the College:—

“ Sciant omnes, Nos, A. B. Præsidentem Collegii Medicorum Londinensis, unâ cum consensû Sociorum ejusdem, auctoritate nobis a Domino Rege et Parlamento commissâ, examinâsse et approbâsse ornatissimum virum, T. S. et ei concessisse liberam facultatem et licentiam tam docendi quam exercendi scientiam et artem medicam, eidemque summis honoribus et titulis et privilegiis, quæcunque hic vel alibi Medicis concedi solent, intra auctoriatis nostræ limites frui dedisse. In cujus rei fidem et testimonium, adjectis Censorum et Registrarii chirographis, sigillum nostrum commune præsentibus apponi fecimus, datis ex ædibus Collegii die

mensis

anno Domini millesimo octingentesimo.

_____	}	<i>Censores.</i>

_____		<i>Registrarius.</i>

“The College gives no particular rules as to the details of previous education, or the places at which it is to be obtained. It will be obvious, however, from a reference to the character and extent of the study above described, the manner in which the examinations are conducted, and the mature age of the Candidates, as affording full time for acquiring the necessary knowledge, *that there will be ample security afforded to the public and the profession, that none but those who have had a liberal and learned education can presume, with the slightest hope of success, to offer themselves for approval to the Censor's Board*; and as the College trusts, that by a faithful discharge of its own duty, it can promise itself the satisfaction of thus continuing to admit into the order of ENGLISH PHYSICIANS, *a body of men who shall do honour by their qualifications, both general and professional*, it is prepared to regard in the same light, and address by the same appellation, all who have obtained its diploma, whether they have graduated elsewhere or not.

“In drawing up and promulgating the above regulations, the College has endeavoured fairly to look at that which is substantial, rather than that which is merely nominal, in all that concerns the qualification of its members; it has resolved to estimate all testimonials, whether they are presented under the name of certificates, diplomas, or degrees, strictly with reference to their value, and to measure them by this standard alone, as parts of the previous qualification of Candidates, which they are to verify in their examinations.

“The College feels confident, that it has overstepped neither the spirit nor letter of the laws which have invested it with the power of governing and legislating for the whole Faculty of Medicine within its jurisdiction, by thus earnestly endeavouring to maintain its character and reputation, and vindicate its claim to be the source of professional honour.

“FRANCIS HAWKINS,

“Registrar.

“December 22nd, 1838.”

Having obtained my “Letters Testimonial,” they were my passport to the brightest ornaments of the profession; and procured for me the advantage of having my manuscript examined and its matter scrutinized by some of the ablest and most honourable men in this metropolis, men of high standing in the College of Physicians; and they did me the honour to express their conviction, that my treatise contained much original and valuable matter; and that by directing attention to an intricate and wholly neglected subject, it would undoubtedly prove useful to the profession.

I expected, though I feared not, the lash of the reviewers, having M. Lallemand's thorny path before me. If the usual

course had been pursued, and my work had been reviewed, instead of being myself condemned for practices having no other existence than false and scurrilous insinuations, without even any attempt to criticise the matter of the work—I should have submitted without a murmur; nor should I have ever breathed a word of complaint. Lallemand, who published upon this subject, experienced the greatest opposition and oppression; but now I am proud to state, that he, to whom I am so much indebted for having assisted me in my researches, is considered by the faculty in France one of the brightest ornaments of the profession,—having been first appointed by Government a professor at the University of Montpellier; and as a further token, he has been since called to a very high post at Paris, as a proof of how highly his researches were valued.

But everything *original*, or savouring even in the slightest degree of *novelty*, is alike doomed to hostility and opposition.

“How was the Circulation of the Blood received? Harvey, its immortal discoverer, was persecuted through life; his enemies in derision styled him *The Circulator*—a word, in its original signification, meaning vagabond or quack. How wild were the theories, how fanciful the hypotheses of the eminent men of Greece and Rome—the great anatomical teachers and philosophers of the middle ages—respecting the circulation of the blood, may be inferred from the fact of their naming certain blood-vessels, *arteries*, or *air-vessels*—tubes which we have only to wound to see them pour out the living current, which contain not air but blood. The immediate reward of this discovery was *calumny*, *misrepresentation* and the loss of his professional practice. Not content with slandering the character of its discoverer, the more *vile* and *menial* of his medical brethren made it a pretext for declining to meet him in consultation.

“Ambrose Parè, principal surgeon to the King of France, introduced the ligature as a substitute for boiling pitch, to prevent bleeding after amputation; he was the first that tied the arteries. Mark HIS reward! he was hooted and howled down by the faculty of physic, who ridiculed the idea of hanging human life upon a thread, when boiling pitch had stood the test of centuries. In vain he pleaded the agony of the old application—in vain he

showed the success of the ligature. Notwithstanding all this he was persecuted with the most remorseless rancour; but fortunately for him, he had a spirit to despise, and a master to protect him against all the efforts of malice.

“The immortal Jenner, who discovered Vaccination, was not only persecuted and oppressed, but even long after the benefits which his practice had conferred upon mankind had been universally admitted, his license to practice his profession was refused.

“Can it be wondered at that medicine should have made so little progress, if they only can advance to fortune who know nothing more than the *jargon* and *crudities* which pass for medical science? How true were the words of the son of Sirach, ‘After searching the world he returned, and saw under the sun that there was neither bread to the wise, nor riches to men of understanding, nor favour to men of skill!!!’”*

In conclusion, I would remind those reviewers whose fastidious delicacy would abandon, without the least remorse, the unfortunate victims of EXCEPTIONABLE diseases to their fate—to such I would recall the observations of Dr. Smyth:—“With the medical practitioner,” says he, “less frequently, perhaps, than with any other professionalist, from the confidence so readily reposed in his calling, does delicacy or prudery supersede utility.”

15, *Finsbury Circus*, September 1848.

* Dickson’s Fallacies of the Faculty.

